

TM 9-2330-335-13&P

TECHNICAL MANUAL

OPERATOR AND FIELD MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR

SEMITRAILER, TACTICAL, BREAKBULK/CONTAINER TRANSPORTER, 22½ TON, R

M871R

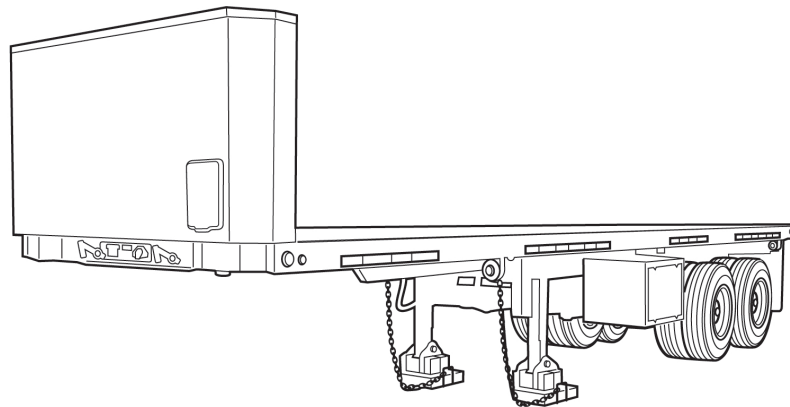
NSN 2330-01-528-6690 (EIC CAN)

M871A1R

NSN 2330-01-528-6673 (EIC CAM)

M871A2R

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SUPERSEDURE NOTICE: This manual supersedes TM 9-2330-335-14&P dated 30 September 2008, including all changes.

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HEADQUARTERS, DEPARTMENT OF THE ARMY, WASHINGTON D.C.
07 DECEMBER 2015

WARNING SUMMARY

FIRST AID

First aid is defined as "urgent and immediate lifesaving and other measures, which may be performed for casualties by nonmedical personnel when medical personnel are not immediately available."

FOR MORE INFORMATION ON FIRST AID, REFER TO FM 4-25.11.

EXPLANATION OF SAFETY WARNING ICONS



ELECTRICAL - Electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.



FALLING PARTS - Arrow bouncing off human shoulder and head shows that falling parts present a danger to life or limb.



FLYING PARTICLES - Arrows bouncing off face shield show that particles flying through the air will harm face.



HEAVY OBJECT - Human figure stooping over heavy object shows physical injury potential from improper lifting technique.



HEAVY PARTS - Foot with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - Hand with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - Heavy object on human figure shows that heavy parts present a danger to life or limb.



HEAVY PARTS - Heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.



HOT AREA - Hand over object radiating heat shows that part is hot and can burn.

WARNING SUMMARY - Continued

EXPLANATION OF SAFETY WARNING ICONS - Continued



SHARP OBJECT - Pointed object in hand shows that a sharp object presents a danger to limb.



SHARP OBJECT - Pointed object in hand shows that a sharp object presents a danger to limb.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION

WARNING



- CHECK THE PRIME MOVER'S TM (TECHNICAL MANUAL) FOR ANY FIFTH WHEEL ADJUSTMENTS REQUIRED FOR HIGHWAY, SECONDARY, OFF-ROAD, AND CROSS-COUNTRY OPERATIONS. The M818, M931, and M932 series tractors require that fifth wheel wedges must be in the locked-in (pushed-in) mode for highway and secondary road use and in the locked-out (pulled-out) mode for cross-country operation. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Extreme caution must be exercised in all turns, curves, and highway cloverleaves when towing a high-center-of-gravity, containerized load as containerized load may fall off semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Under no circumstances shall speeds exceed the following:
 - Highway: 55 mph (89 kph)
 - Secondary: 35 mph (56 kph)
 - Trails: 15 mph (24 kph)
 - Rough: 10 mph (16 kph)Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- When transporting the 8.5 ft (2.6 m) commercial container, the prime mover's fifth wheel height must not exceed 4.2 ft (1.28 m) to comply with the 13.12 ft (4 m) overall height limit for United States Army, Europe (USAREUR). The M915 fifth wheel height meets this requirement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Ensure spare tire and wheel assembly is secured in carrier and securing hardware is present. Failure to secure the spare tire may result in the spare tire falling off semitrailer. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- DO NOT allow brake lining to wear to the point that the rivets touch the brake drum. This condition can cause brake failure. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- A 20 ft (6.1 m) International Organization for Standardization (ISO) container loaded against the forward bulkhead will overload the fifth wheel rating of the M1088 by 4,500 lb (2,041 kg). The ISO should be loaded to the rear of the M871R to prevent stability/loading problems with the M1088. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



DO NOT tow the semitrailer with the M52, M52A1, or M52A2 prime mover. The inherent design capabilities of the M52 series are not compatible with the semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING



Chock wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- Caging the air brake chambers is an emergency procedure. This is to be used only to move the semitrailer off the traveled portion of the road when a brake line or other part fails causing loss of air brake system air pressure. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Spring in air brake chamber is under 2,500 lbF (1,134 kgF) of force. When inspecting or caging air brake chambers, DO NOT position yourself in front of, or in line with, the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- If spring brake shows structural damage, DO NOT cage the spring and DO NOT attempt to service it. Replace the complete unit. When removing an uncaged spring brake from a vehicle, cut the service push rod making sure to relieve all pressure. After cutting the push rod, remove the spring brake from the vehicle. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Never strike any part of the spring brake with a hammer or any other heavy object. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- DO NOT drop spring brake, as compression spring may forcefully release. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- DO NOT use prime mover air pressure or power driven impact tools to cage the air brake chamber. Excessive torque can cause damage to the spring pressure plate resulting in sudden release of the spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- DO NOT place any part of your body under semitrailer while slinging operations are underway. DO NOT lift a loaded semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- DO NOT lift the semitrailer without a ground guide. Use a 30 ft (9 m) guideline attached to one rear lift point. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING



- DO NOT place any part of your body under a container during the loading or unloading operation. Container may crush, pinch, or pin any body part that is under a container. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Ensure retaining hardware is present and serviceable. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

WARNING



DO NOT tow the semitrailer with an unsecured cargo container. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING



Ensure side and rear stakes and panels are secured before on-road operation. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- Wear eye protection when opening air reservoir drain valve, and avoid contact with the air stream. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- DO NOT use air pressure or a steel bristle brush to clean cones and rollers. Use kerosene or diesel fuel to clean bearings. DO NOT use gasoline. DO NOT rotate bearings using compressed air as this will damage the polished surfaces. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- At triennial brake inspection/service, all brake wheel end components must be cleaned and inspected for wear and damage. Inspect all linings, springs, pins, rollers, clips, and bushings on each axle end. Ensure seals show no signs of leakage on axle, spider, or wheels. Use all components of replacement kits, and balance repairs on both axle ends. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. To prevent injury, user must wear eye protection or face shield. Ensure air stream is directed away from user and other personnel in the area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- DO NOT overtighten hose end brass fittings. The fittings should be installed finger tight with an additional 1 to 1.5 turns using a wrench. DO NOT twist hoses. Check for air leaks. Failure to comply may cause fitting failure or brake lockup. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Clean and check all S-camshaft brake components for wear and damage. Replace worn or damaged parts. At triennial service, replace all O-rings, bushings, retainers, snap rings, lockwashers, and brackets on each axle end. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

- Clean and check service brakes and all brake components for wear and damage. Replace worn or damaged parts. At triennial service, replace all springs, pins, rollers, clips, and bushings on each axle end. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING



After first month or first 1,000 miles (1,609 km) (from hub mileage meter) of suspension repair, suspension nuts must be torqued. Refer to Field PMCS for proper torque procedure. Failure to comply may result in loss of suspension and parts. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING



- Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Ensure all personnel stand clear of the prime mover and semitrailer during coupling operations. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- For service and repair tasks on the semitrailer, ground boards and wheel chocks should be used to ensure safe coupling and prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

WARNING



Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- A hot brake drum can cause serious burns. Exercise extreme caution before attempting to touch brake drum after use. Radiated heat will be felt before brake drum is touched. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- The triennial (3-year) 36,000 mi (57,936 km) check/service is based on normal operation. Conditions identified, such as hot/cold brake drums, leakage/seepage of spindle/hub grease, brake lockup, wheel end noise/damage, and impact damage, will require inspection and repair when the incident occurs, not at service interval. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING



Ensure landing leg scissor assembly's retaining (hitch) pins are installed extending inward. If installed extending outward, they will be a contact hazard. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- Spare tire and wheel assembly weighs 179 lb (81 kg). Use two personnel to remove spare tire and wheel assembly from carrier or to install onto carrier. Slide spare tire and wheel assembly from carrier or onto carrier. Refrain from lifting spare tire and wheel assembly. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Landing gear weighs 200 lb (91 kg). Use two personnel to replace landing gear. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Tire and wheel assembly weighs 179 lb (81 kg). Use two personnel to handle tire and wheel assembly. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Axle weighs 200 lb (91 kg). Use four personnel to lift axle. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Brake drum weighs 60 lb (27 kg). Use two personnel to lift brake drum. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- Spring weighs 240 lb (109 kg). Use four personnel to lift spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Trunnion tube weighs 100 lb (45 kg). Use two personnel to lift trunnion tube. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING



- Bulkhead weighs 557 lb (253 kg). Use suitable lifting device and two personnel to replace bulkhead. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Stowage box weighs 195 lb (88 kg). Use suitable lifting device and two personnel to replace stowage box. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- Watch hands and fingers when removing and installing ground boards. Hands and fingers may be pinched or cut. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- For fifth wheel heights of 62 in. (157 cm), as on M1088, it is recommended that the ground boards are placed under the extended and locked scissors landing leg feet on the M871R. DO NOT attempt to couple the prime mover with the semitrailer below the fifth wheel height. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

WARNING



Avoid contact with live steam. Live steam can burn skin, cause blindness, and cause other serious injury. Wear eye protection, gloves, and protective apron when using live steam. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNING DESCRIPTION - Continued

WARNING



- Service air can be identified by blue markings on gladhand; emergency air can be identified by red markings on gladhand. DO NOT cross service or emergency air lines at gladhands. Ensure they are hooked up correctly to meet brake air pressure requirements. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- If nuts cannot be torqued, at first opportunity have Field Maintenance torque nuts to proper specifications. If mission allows, stop and check nuts for tightness. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- DO NOT use grease with antiseize compound, more than 3-percent molysulfide content, or "white" grease in the automatic slack adjusters. These lubricants will adversely affect the friction clutch so it will not hold the adjustment, resulting in premature failure. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- DO NOT get oil on mounting face of brake drum or wheel. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Wipe excess lubricant from area of brake shoe linings to prevent any contamination of linings. Replace linings that have been contaminated with lubricant to prevent brake malfunction. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

EXPLANATION OF HAZARDOUS MATERIALS ICONS



BIOLOGICAL - Abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to life or health.



CHEMICAL - Drop of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.



EYE PROTECTION - Person with goggles shows that material will injure the eyes.



FIRE - Flames show that a material may ignite and cause burns.



POISON - Skull and crossbones shows that a material is poisonous or is a danger to life.



VAPOR - Human figure in a cloud shows that material vapors present a danger to life or health.

WARNING SUMMARY - Continued

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION

WARNING



- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

WARNING SUMMARY - Continued

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION - Continued

WARNING



DO NOT handle brakeshoes, brakedrums or other brake components unless area has been properly cleaned. There may be hazardous dust on these components, which can be dangerous if you touch it or breath it. Wear an approved filter mask and gloves. NEVER use compressed air or a dry brush to clean brake components. Dust may be removed using an industrial-type vacuum cleaner. Clean dust or mud away from brake components with water and a wet, soft brush or cloth. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

WARNING



Wear eye protection when driving heads off rivets. Failure to comply may result in eye injury or loss of vision. Seek medical attention in event of injury.

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

WARNING SUMMARY - Continued

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION - Continued

WARNING



Chemical Active Resistant Coating (CARC) topcoat paint contains isocyanates (ICN), which can trigger an allergic reaction in some people (lasting a few days to a few months) producing asthmatic like symptoms such as coughing, wheezing, tightness in the chest, shortness of breath, including reddening of the skin and eyes, and itching. If you are or become sensitized to CARC paint never use or apply CARC paint even in the above symptoms are minor. Observe the following precautions to ensure the safety of personnel when CARC paint is applied.

- For spray/brush/roller painting in confined spaces, an air-line respirator is required, unless an air sampling shows exposure to be below standards. If air sampling is below standards, either chemical cartridge or air-line respirators are required.
- Spot painters applying CARC paint by brush or roller must wear clothing and gloves affording full coverage. Personnel using touch-up spray kits should wear an air-line respirator and protective clothing.
- DO NOT use alcohol or amine-based solvents to thin or remove CARC paints. Use of solvents with CARC paints can produce chemical reactions resulting in nausea, disease, burns or severe injury to personnel.
- DO NOT use paint solvents to remove paint/coating from skin.
- Mix paint/coating in a well-ventilated mixing room or spraying area away from open flames. Personnel mixing paint/coating should wear eye protection.
- Use paint/coating with adequate ventilation.
- Personnel grinding or sanding on painted equipment should use high efficiency air-purifying respirators.

Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

WARNING



Never weld or use a cutting torch on Chemical Active Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material. Welding or cutting painted surfaces releases toxic gases, vapors, and metal fumes. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

WARNING SUMMARY - Continued

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION - Continued

WARNING



Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

WARNING



Compressed air for cleaning purposes should not exceed 30 psi (207 kPa). Particles blown by compressed air are hazardous. Ensure the air stream is directed away from user and other personnel in the area. To prevent injury, user must wear eye protection or face shield when using compressed air. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury. information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

WARNING



Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. To prevent injury, user must wear eye protection or face shield. Ensure air stream is directed away from user and other personnel in the area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

WARNING SUMMARY - Continued

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION - Continued

WARNING



- Adhesives and sealing compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.
- Adhesives and sealing compounds bond immediately on contact with eyes, skin, or clothing. DO NOT allow compounds to contact skin or eyes. Use eye protection or face shield and protective gloves. If sealing compound or adhesive contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.

WARNING



- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: This manual supersedes TM 9-2330-335-14&P dated 30 September 2008, including all changes. Zero in the "Change No." column indicates an original page or work package.

Date of issue for the revised manual is:

Original 07 December 2015

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 46 AND TOTAL NUMBER OF WORK PACKAGES IN THIS MANUAL IS 138, CONSISTING OF THE FOLLOWING:

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a-r	0	WP 0025 (4 pages)	0
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iii-xix/blank	0	WP 0027 (2 pages)	0
Chapter 1 Title Page	0	WP 0028 (4 pages)	0
Work Package Index	0		0
WP 0001 (6 pages)	0	Chapter 8 Title Page	0
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WP 0003 (2 pages)	0	WP 0029 (4 pages)	0
Chapter 2 Title Page	0	WP 0030 (4 pages)	0
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HEADQUARTERS, DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 07 DECEMBER 2015

TECHNICAL MANUAL
OPERATOR AND FIELD MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST
FOR

SEMITRAILER, TACTICAL, BREAKBULK/CONTAINER
TRANSPORTER, 22½ TON, R

M871R

NSN 2330-01-528-6690 (EIC CAN)

M871A1R

NSN 2330-01-528-6673 (EIC CAM)

M871A2R

NSN 2330-01-528-6698 (EIC CAK)

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Current as of 14 March 2011

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HOW TO USE THIS MANUAL

SCOPE

This manual provides you with the information you will need to operate and maintain the M871R, M871A1R, and M871A2R Semitrailers.

MANUAL CONTENT

The front matter in this manual consists of Warning Summary, Title Block page, and Table of Contents.

The information contained in this manual is presented in 10 chapters. Each chapter is divided into Work Packages (WPs) that provide operating procedures, maintenance procedures, troubleshooting procedures, and other information for specific systems or components. Each WP starts on a right-hand page. Page numbers consist of the WP number followed by a dash and a second number. For example, "0008-9" means WP 0008, page 9.

The end of this manual contains an alphabetical index, DA Form 2028, and metric conversion chart.

FRONT MATTER

The "Warning Summary" starts on the first right-hand page immediately after the cover and should be read before performing any maintenance on the M871R, M871A1R, and M871A2R Semitrailers.

The Title Block page includes the reporting errors and recommending improvements statement.

The Table of Contents lists the chapters, figures, tables, and WPs in this manual.

CHAPTERS

Chapter 1 provides General Information, Equipment Description, and Theory of Operation.

Chapter 2 provides Description and Use of Controls and Indicators, and Operation Under Usual and Unusual Conditions.

Chapter 3 provides Operator Troubleshooting Procedures.

Chapter 4 provides Field Troubleshooting Procedures.

Chapter 5 provides Operator Preventive Maintenance Checks and Services (PMCS) Maintenance Instructions.

Chapter 6 provides Field Preventive Maintenance Checks and Services (PMCS) Maintenance Instructions.

Chapter 7 provides Operator Maintenance Instructions.

Chapter 8 provides Field Maintenance Instructions.

Chapter 9 provides Parts Information (RPSTL).

Chapter 10 provides Supporting Information, including the titles of documents and publications referenced in this manual (References), Maintenance Allocation Chart (MAC) Introduction, MAC, and Basic Issue Items (BII) lists, Additional Authorization List (AAL), Expendable and Durable Items List (EDIL), and Tool Identification List.

HOW TO USE THIS MANUAL - Continued

ALPHABETICAL INDEX

An index is located after the last WP in this manual and provides an alphabetical listing of WPs contained in this manual.

DA FORM 2028

DA Form 2028 is used to report errors and to recommend improvements for the tasks in this manual.

METRIC CONVERSION CHART

The metric conversion chart converts U.S. Standard measurements to Metric equivalents. Measurements in this manual are provided in both U.S. Standard and Metric units.

WARNINGS, CAUTIONS, AND NOTES

You must read and understand this manual **BEFORE** operating the M871R, M871A1R, and M871A2R Semitrailers.

Throughout this manual you will see WARNING, CAUTION, and NOTE headings. There are good reasons for every one of the following headings:

WARNING: A warning is used to alert the user to hazardous operating and maintenance procedures, practices, or conditions that could result in death or injury. Warnings must be strictly observed.

CAUTION: A caution is used to alert the user to hazardous operating and maintenance procedures, practices, or conditions that could result in damage to or destruction of equipment or mission effectiveness. Cautions must be strictly observed.

NOTE: A note highlights an essential operating or maintenance procedure, condition, or statement.

Warnings and cautions appear immediately preceding the step to which they pertain. It is important to read and thoroughly understand the warnings and/or cautions before beginning maintenance. Notes may precede or follow the steps to which they pertain, depending on which makes more sense.

INITIAL SETUP

Before starting a task, you must obtain all the tools, supplies, and personnel listed in the initial setup. Ensure to read the task before performing the maintenance. If any other tasks are referenced, you must go to the initial setup page for each of those tasks to find out what tools, supplies, and personnel will be needed.

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

The RPSTL Introduction (WP 0089) explains how to use the RPSTL. Repair parts are listed and illustrated in the Parts Information (Chapter 9). There are no special tools; test, measurement, and diagnostic equipment; or support equipment.

HOW TO USE THIS MANUAL - Continued

INDEXING

Three indexing procedures are used in this manual to help you locate information quickly:

- Table of Contents
- Work package indexes
- Alphabetical index at the back of this manual

CHAPTER 1

**GENERAL INFORMATION, EQUIPMENT DESCRIPTION,
AND THEORY OF OPERATION**

WORK PACKAGE INDEX

Title	WP Sequence No.
GENERAL INFORMATION.....	WP 0001
EQUIPMENT DESCRIPTION AND DATA.....	WP 0002
THEORY OF OPERATION.....	WP 0003

FIELD MAINTENANCE GENERAL INFORMATION

SCOPE

Type of Manual

Operator and Field Maintenance Manual Including Repair Parts and Special Tools List (RPSTL).

Equipment Names and Model Numbers

1. M871R, Semitrailer, Tactical, Breakbulk/Container Transporter, 22½ Ton, R, NSN 2330-01-528-6690
2. M871A1R, Semitrailer, Tactical, Breakbulk/Container Transporter, 22½ Ton, R, NSN 2330-01-528-6673
3. M871A2R, Semitrailer, Tactical, Breakbulk/Container Transporter, 22½ Ton, R, NSN 2330-01-528-6698

Purpose of Equipment

Used to transport containerized American National Standard Institute/International Organization for Standardization (ANSI/ISO), breakbulk cargo, or ammunition on highways or off-road.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army (DA) forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; or AR 700-138, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your (insert equipment short item name) needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance.

All non-Aviation/Missile EIRs and PQDRs must be submitted through the Product Data Reporting and Evaluation Program (PDREP) Web site. The PDREP site is: <https://www.pdrep.csd.disa.mil/>.

If you do not have Internet access, you may submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using email, regular mail, or fax using the addresses/fax numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion prevention and control of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. The term "corrosion" means the deterioration of a material or its properties due to a reaction of that material with its chemical environment. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade (also considered to be corrosion based on the above definition of corrosion). Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically ultraviolet) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. The U.S. Army has defined the following nine (9) forms of corrosion used to evaluate the deterioration of metals. These shall be used when evaluating and documenting corrosion.

UNIFORM (or general attack): Affects a large area of exposed metal surface, like rust on steel or tarnish on silver. It gradually reduces the thickness of the metal until it fails.

CREVICE: Occurs in crevices created by rubber seals, gaskets, bolt heads, lap joints, dirt or other surface deposits. It will develop anywhere moisture or other corrosive agents are trapped and unable to drain or evaporate.

SELECTIVE LEACHING: One element, usually the anodic element of an alloy, corrodes away, leaving the cathodic element. This can create holes in metal.

INTERGRANULAR: Metal deterioration caused by corrosion on the bonds between or across the grain boundaries of the metal. The metal will appear to be peeling off in sheets, flaking, or being pushed apart by layers. A particular type of intergranular corrosion is exfoliation.

PITTING: This can result from conditions similar to those for crevice corrosion. Pits can develop on various materials due to their composition. Rifle boxes are big victims of pitting.

EROSION: Results when a moving fluid (liquid or gas) flows across a metal surface, particularly when solid particles are present in the fluid. Corrosion actually occurs on the surface of the metal, but the moving fluid washes away the corrosion and exposes a new metal surface, which also corrodes.

FRETTING: Occurs as a result of small, repetitive movements (e.g., vibration) between two surfaces in contact with each other. It is usually identified by a black powder corrosion product or pits on the surface.

GALVANIC: Occurs when two different types of metal come in contact with each other, like steel bolts on aluminum, for example. This is a common problem on aircraft because of their mix of metals.

STRESS: Term used to describe corrosion cracking and corrosion fatigue. Where an item is not ready/available due to one of these forms of corrosion, it shall be recorded as a corrosion failure in the inspection record and the appropriate code (170) for corrosion shall be used when requesting/performing maintenance.

SF Form 368, Product Quality Deficiency Report (PQDR) should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

For destruction of Army materiel to prevent enemy use, refer to TM 750-244-3.

PREPARATION FOR STORAGE OR SHIPMENT

Refer to WP 0083 for storage and shipment information.

TRANSPORTABILITY**NOTE**

- Specific tiedown transportability data for rail, truck, and fixed wing air movement is in SDDCTEA PAM 55-19, SDDCTEA PAM 55-20, SDDCTEA PAM 55-24, respectively.
- The bulkhead is removable.

All M871R Models can be:

- Loaded or unloaded, are transportable by C-5 and C-5A fixed wing aircraft.
- Loaded or unloaded, are transportable by C-17 fixed wing aircraft.
- Loaded or unloaded, are transportable by rail and with ISO container (in the Continental United States (CONUS))
- Loaded or unloaded, are transportable by ship.
- May be stacked, two semitrailers, bulkhead to bulkhead, for transport by a prime mover.
- Loaded or unloaded, are transportable by barge as dictated by the length of the semitrailer and barge load capacity.
- Unloaded, are transportable by rotary wing aircraft (CH-47). Refer to FM 4-20.199.
- Unloaded, are transportable by C-130 fixed wing aircraft.

LIST OF ABBREVIATIONS/ACRONYMS

NOTE

Refer to ASME Y14.38-2007, Abbreviations and Acronyms for Use on Drawings and Related Documents, for standard abbreviations.

<u>Abbreviation/Acronym</u>	<u>Name</u>
°C	Degrees Celsius
°F	Degrees Fahrenheit
±	Plus or Minus
AAL	Additional Authorization List
ABS	Antilock Brake System
amp	Ampere
ANSI	American National Standards Institute
AR	As Required
ASA	Automatic Slack Adjuster
BCV	Brake Control Valve
BII	Basic Issue Item
BO	Blackout
BOI	Basis of Issue
CAC	Common Access Card
CAGEC	Commercial and Government Entity Code
CARC	Chemical Agent Resistant Coating
cm	Centimeter
COEI	Components of End Item
CONUS	Continental United States
CPC	Corrosion Prevention and Control
CTA	Common Table of Allowance
DA	Department of the Army
ea.	Each
ECU	Electronic Control Unit
EDIL	Expendable and Durable Items List
EIC	End Item Code
EIR	Equipment Improvement Recommendation
EMP	Electromagnetic Pulse
FM	Field Manual
FRS	Forward Repair System
FSCM	Federal Supply Code for Maintenance
ft	Foot
GAA	Grease, Automotive and Artillery
HCI	Hardness Critical Item
I/O	Input/Output
ICN	Isocyanate
in.	Inch
ISO	International Organization for Standardization
JTA	Joint Table of Allowances
kg	Kilogram
kgF	Kilogram Force
km	Kilometer
kPa	Kilopascal
kph	Kilometers per Hour
lb	Pound
lbF	Pound Force

LIST OF ABBREVIATIONS/ACRONYMS - Continued

<u>Abbreviation/Acronym</u>	<u>Name</u>
lb-ft	Pound-Foot
lb-in	Pound-Inch
LED	Light-Emitting Diode
LPRS	Loose Projectile Restraint System
m	Meter
MAC	Maintenance Allocation Chart
mi	Mile
MIG	Metal Inert Gas
mm	Millimeter
mph	Miles per Hour
MTOE	Modified Table of Organization and Equipment
MWO	Modification Work Order
N•m	Newton Meter
NHA	Next Higher Assembly
NIIN	National Item Identification Number
NPTF	National Pipe Thread Fuel
NSN	National Stock Number
OCONUS	Outside Continental United States
OE/HDO	Lubricating Oil, Internal Combustion Engine, Tactical Service
OEA	Oil, Engine Arctic
OEM	Original Equipment Manufacturer
OS	Overslung
P/N	Part Number
PDREP	Product Data Reporting and Evaluation Program
PLC	Power Line Carrier
PMCS	Preventive Maintenance Checks and Services
PM-SKOT	Program Manager - Sets, Kits, Outfits, and Tools
POL	Petroleum, Oils, and Lubricants
PQDR	Product Quality Deficiency Report
psi	Pounds per Square Inch
RFID	Radio Frequency Identification
RPSTL	Repair Parts and Special Tools List
SAE	Society of Automotive Engineers
SATS	Standard Automotive Tool Set
SEW	Shop Equipment Welding
SKO	Sets, Kits, and Outfits
SMR	Source, Maintenance, and Recoverability
SRA	Specialized Repair Activity
TACOM	Tank Automotive and Armaments Command
TAMMS	The Army Maintenance Management System
TB	Technical Bulletin
TDA	Table of Distribution and Allowances
TM	Technical Manual
TMDE	Test, Measurement, and Diagnostic Equipment
TOE	Table of Organization and Equipment
U/I	Unit of Issue
UID	Unit Identification Device
UNF	Unified Fine
UOC	Usable On Code
US	Underslung
USAREUR	United States Army, Europe
UUT	Unit Under Test
UV	Ultraviolet

LIST OF ABBREVIATIONS/ACRONYMS - Continued

<u>Abbreviation/Acronym</u>	<u>Name</u>
V	Volt
WD	Water Dispersible
WP	Work Package
wt	Weight

END OF WORK PACKAGE

FIELD MAINTENANCE EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

EQUIPMENT DESCRIPTION

Capabilities and Features

WARNING



- DO NOT tow the semitrailer with the M52, M52A1, or M52A2 prime mover. The inherent design capabilities of the M52 series are not compatible with the semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- CHECK THE PRIME MOVER'S TECHNICAL MANUAL (TM) FOR ANY FIFTH WHEEL ADJUSTMENTS REQUIRED FOR HIGHWAY, SECONDARY, OFF-ROAD, AND CROSS COUNTRY OPERATIONS. The M818, M931, and M932 series tractors, require that fifth wheel wedges must be in the locked-in (pushed-in) mode for highway and secondary road use and in the locked-out (pulled-out) mode for cross-country operation. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Under no circumstances shall speeds exceed the following:
 - Highway: 55 mph (89 kph)
 - Secondary: 35 mph (56 kph)
 - Trails: 15 mph (24 kph)
 - Rough: 10 mph (16 kph)

Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

See prime mover's TM for maximum payload capacities and/or restrictions.

The M871R semitrailer has the following capabilities and features:

- easily configured for either breakbulk or containerized cargo.
- can be towed by M915 for improved highway use only, or the M818, M878, M931, M932, and M1088 series for either highway or off-road.
- can carry up to 45,000 lb (20,412 Kg) of cargo.
- side panels are easily installed or removed.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

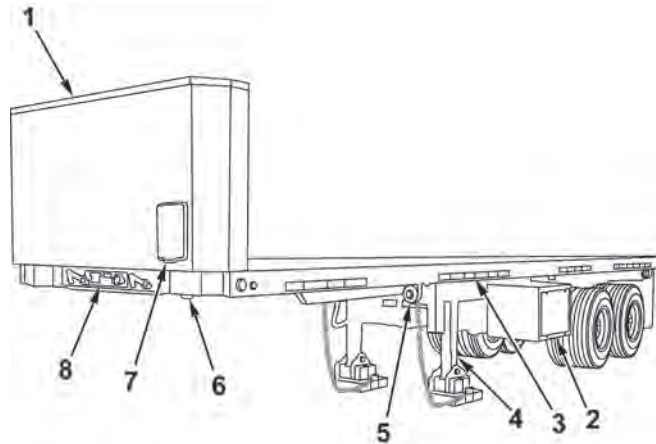


Figure 1. Left Front View.

Table 1. Left Front Components and Descriptions.

KEY	COMPONENT	DESCRIPTION
1	Bulkhead, Removable	Constructed of steel. When carrying breakbulk cargo with the side and rear panels installed, the bulkhead will keep the load from shifting forward. Can also be used to store the ladder and side and rear panels. Bulkhead is removable.
2	Stowage Box	Used to store Basic Issue Items (BII) and Additional Authorization List (AAL) items. It is a bolt-on box.
3	Reflective Tape	Provides highly reflected areas, making the semitrailer more noticeable to enhance safety.
4	Landing Leg	Using the handcrank, the landing legs can be manually extended when the semitrailer is uncoupled from the prime mover and manually retracted when the semitrailer is coupled to the prime mover.
5	Front Lift/Tiedown Point	Used to lift or tie down the semitrailer. One on each side.
6	Kingpin	Connects the semitrailer to the fifth wheel of the prime mover.
7	Manifest Box	Used to store the cargo manifests.
8	Receptacle Converter Box	Contains the electrical connections.

NOTE

The Radio Frequency Identification (RFID) tag is for shipping purposes only. A mounting bracket may or may not be present. Mounting locations may vary.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

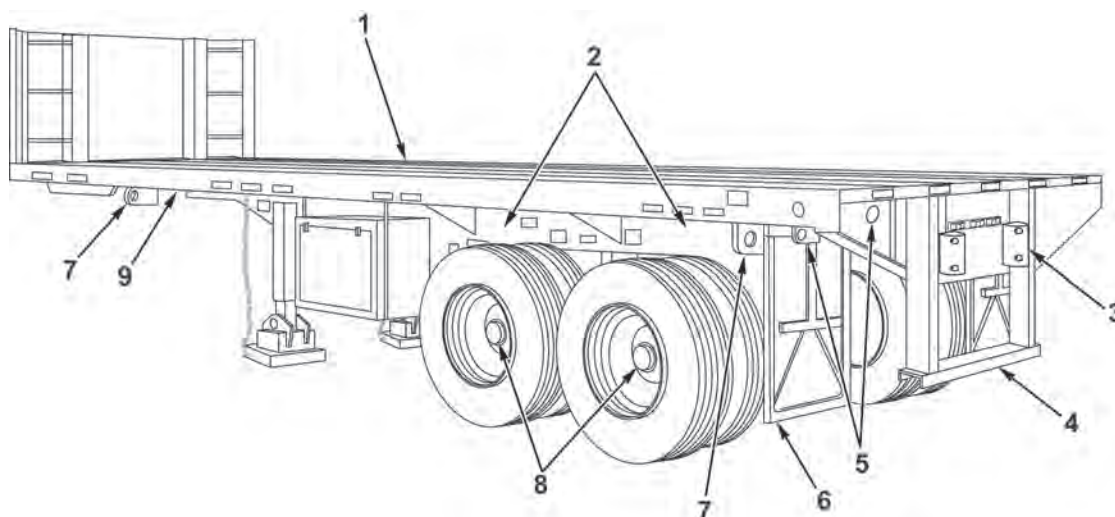


Figure 2. Left Rear View.

Table 2. Left Rear Components and Descriptions.

KEY	COMPONENT	DESCRIPTION
1	Floor Deck Boards	Screwed to the frame for easy maintenance.
2	Air Reservoirs Pressure-Release Pull Cables	When pulled, open drain valve and allow air pressure to drain from air reservoir.
3	Rubber Bumpers	Prevent damage to the semitrailer and the dock when loading and unloading.
4	Rear Bumper	Prevents damage to the suspension when backing the semitrailer into the dock.
5	Service Lights	Include blackout, clearance, and Light-Emitting Diode (LED) taillights.
6	Mud Flaps	Keep mud and water from being splashed off to the rear. Also keep rocks from being thrown off to the rear when traveling on unimproved roads.
7	Lift/Tiedown Points	Used to lift or tie down the semitrailer. One on each side.
8	Tandem Axles	Consist of the suspension system, brake system, axles, and tires.
9	Frame	Constructed of steel. Provides the load-bearing surface and mounting for axles, suspension, kingpin, bulkhead, and side racks.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

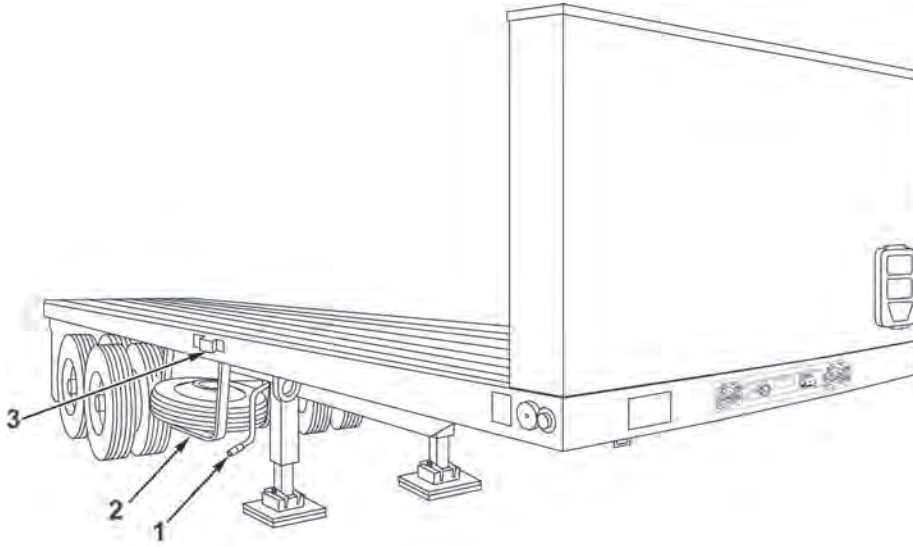


Figure 3. Right Front View.

Table 3. Right Front Components and Descriptions.

KEY	COMPONENT	DESCRIPTION
1	Handcrank	Rotating the handcrank extends or retracts the landing legs.
2	Spare Tire Carrier	Carries and secures the spare tire.
3	Ladder Bracket	Used to hold the ladder in place.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

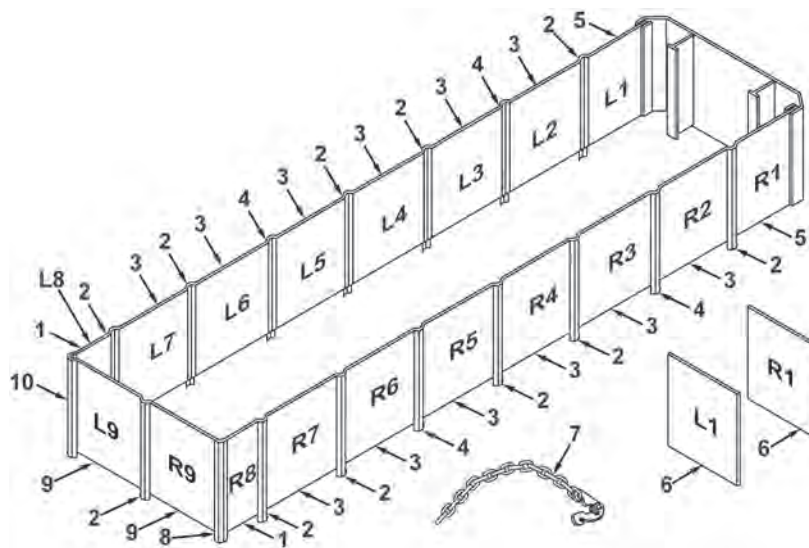


Figure 4. Panels and Stakes.

Table 4. Panels and Stakes Locations and Descriptions.

KEY	COMPONENT	DESCRIPTION
1	Side Panels	Quantity: 2. Size: 23.75 × 48 × 0.5 in. (60.33 × 122 × 1.3 cm). Can Be Stored in Bulkhead.
2	Side Stakes	Quantity: 11. Can Be Stored in Bulkhead.
3	Side Panels	Quantity: 12. Size: 47.75 × 48 × 0.5 in. (121.29 × 122 × 1.3 cm). Can Be Stored in Bulkhead.
4	Side Stakes With Loop and Lanyard	Quantity: 4. Can Be Stored in Bulkhead.
5	Side Panels (M871R and M871A1R)	Quantity: 2. Size: 35.75 × 48 × 0.5 in. (90.80 × 122 × 1.3 cm). Can Be Stored in Bulkhead.
6	Side Panels (M871A2R)	Quantity: 2. Size: 42 × 48 × 0.5 in. (107 × 122 × 1.3 cm). Can Be Stored in Bulkhead.
7	Chain Assemblies	Quantity: 4. Can Be Stored in Stowage Box.
8	Right Rear Corner Stake With Loop and Handle	Quantity: 1. Can Be Stored in Bulkhead.
9	Rear Panels	Quantity: 2. Size: 44 × 48 × 0.5 in. (112 × 122 × 1.3 cm). Can Be Stored in Bulkhead.
10	Left Rear Corner Stake With Loop and Handle	Quantity: 1. Can Be Stored in Bulkhead.

M871R AND M871A1R EQUIPMENT DATA*Table 5. M871R and M871A1R Semitrailer Data.*

EQUIPMENT	MEASUREMENT/TYPE
Kingpin Diameter	2 in. (5.08 cm)
Kingpin to Front of Chassis	28 in. (71 cm)
Kingpin to Landing Leg	100 in. (254 cm)
Dimensions Overall	
Length	357.6 in. (908.3 cm)
Width	96 in. (244 cm)
Height	103 in. (262 cm)
Empty Weight	15,630 lb (7,090 kg)
Floor Height	
Empty	55 in. (140 cm)
Loaded	54 in. (137 cm)
Upper Fifth Wheel Plate Height (Loaded)	46 in. (117 cm)
Payload	
Hard-Surface Roads	45,000 lb (20,412 kg)
Cross-Country	45,000 lb (20,412 kg)
Center of Gravity Forward of Suspension	
Empty	166 in. (422 cm)
Loaded	176 in. (447 cm)
Angle of Departure (Loaded)	50 Degrees
Ground Clearance (From Bottom of Axle)	18 in. (46 cm)
Fording Depth	30 in. (76 cm)

M871A2R EQUIPMENT DATA**Table 6. M871A2R Semitrailer Data.**

EQUIPMENT	MEASUREMENT/TYPE
Kingpin Diameter	2 in. (5.08 cm)
Kingpin to Front of Chassis	30 in. (76.2 cm)
Kingpin to Landing Leg (Center-to-Center)	118 in. (299.72 cm)
Dimensions Overall	
Length	372 in. (944.9 cm)
Width	96 in. (243.8 cm)
Height	103 in. (261.62 cm)
Floor Height	
Empty	55 in. (139.7 cm)
Loaded	54 in. (137.16 cm)
Upper Fifth Wheel Plate Height (Loaded)	48 in. (121.92 cm)
Empty Weight	15,980 lb (7,248 kg)
Payload	
Hard-Surface Roads	45,000 lb (20,412 kg)
Cross-Country	45,000 lb (20,412 kg)
Center of Gravity Forward of Suspension	
Center of Gravity From Front of Semitrailer (Empty)	197.5 in. (501.7 cm)
Angle of Departure (Loaded)	50 Degrees
Ground Clearance (From Bottom of Axle)	19 in. (48.26 cm)
Fording Depth	30 in. (76 cm)

M871R, M871A1R, AND M871A2R EQUIPMENT DATA*Table 7. M871R, M871A1R, and M871A2R Semitrailer Data.*

EQUIPMENT	MEASUREMENT/TYPE
Bridge Classification	
Empty With Prime Mover	Class 14
Empty Without Prime Mover	Class 6
Cross-Country Loaded With Prime Mover	Class 25
Cross-Country Loaded Without Prime Mover	Class 18
Highway Loaded With Prime Mover	Class 30
Highway Loaded Without Prime Mover	Class 22
Hub Mileage Meter	
Accuracy	± 2%
Factory Calibration	Calibrated to Mid-Life of Tire, Available Factory-Preset Mileage on Replacement Hub Mileage Meter
Model (Part Number)	50086021
Wheel: Hub-Piloted	
Quantity (Including Spare)	Nine
Size	22.5 × 8.25 in. (57.15 × 20.955 cm)
Material	Steel
Stud Holes	10
Type	One Piece
Flange Nut Torque	450 to 500 lb-ft (610 to 678 N·m)
Type of Nut	Flange, All Right-Hand Threads
Lug Nut Size	1-5/16 in. (3.18 cm)
Tires	
Quantity (Including Spare)	Nine
Type	Tubeless Radial
Size	11R22.5

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued**Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.**

EQUIPMENT	MEASUREMENT/TYPE
Tires - Continued	
Ply Rating (Actual)	16 Ply
Load Range	H
Cold Inflation Pressure (All)	115 psi (793 kPa)
Tire Weight	95.7 lb (43.41 kg)
Diameter	36.7 in. (93.22 cm)
Loaded Section Width	11.0 in. (27.9 cm)
Tread Depth New	18/32 (1.43 cm)
Mission Profile Maximum Speeds	
Highway 55 mph	25%
Secondary 35 mph	60%
Trails 15 mph	10%
Rough 10 mph	5%
Axles	
Number of Axles	Two (Dual Tandem)
Tube Diameter	5 in. (12.7 cm)
Tube Wall Thickness (Heavy)	5/8 in. (1.59 cm)
Model Number	TQ4671Q2405TOA
Series	167H715ABS
Load Capacity (DOT Rating)	20,000 lb (9,072 kg)
Beam Capacity	25,000 lb (11,340 kg)
Spindle (Spindle Center to Spindle Center Between Axles)	49 in. (124.5 cm)
Track (Track Center to Center of Dual Wheels)	71-1/2 in. (181.6 cm)

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued**Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.**

EQUIPMENT	MEASUREMENT/TYPE
Brakes	
Series	Q-Plus
Size	16-1/2 × 7 in. (42 × 18 cm)
Type	Nonasbestos
Activation	Air
System Air Pressure	100 to 115 psi (689 to 793 kPa)
Lining and Shoe	Assembled
Brake Drum	
Material	Sintered Iron Drum Inside
Inside Diameter	16-1/2 in. (42 cm)
Wheel Bearings	
Part Number, Inner (Cone and Rollers)	HM218248
Part Number, Outer (Cone and Rollers)	HM212049
Grease Seal	
Lip Style	46305 Classic, Triple Sealing Lips
Installation	Tool With Centering Plug Driven Into Hub Bore, Pressfit
S-Cams	
Length	24-9/64 in. (61.5 cm)
Number of Splines	28
Shaft Diameter	1-1/2 in. (3.8 cm)
Head Bushing Journal Size	1.62 in. (4.1 cm)
Application	16-1/2 in. (42 cm) Brakes

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued*Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.*

EQUIPMENT	MEASUREMENT/TYPE
Hubs	
Number of Studs	10
Type	ABS With Tone Ring Mounted
Automatic Slack Adjusters	
Series	409-10683
Model	5-1/2 in. (14 cm)
Number of Splines	28
Air Brake Chambers	
Stroke	3.00 in. (7.62 cm)
Weight	20.2 lb (9.2 kg) ea.
Type	Long Stroke
Part Number	166407
Model Number	3030-GC-LS
System Air Pressure	
Minimum	100 psi (689 kPa)
Maximum	115 psi (793 kPa)
Landing Legs	
Shoe Type	Locking Scissors
Model	50,000 No Lube
Crank Radius	16-1/2 in. (42 cm)
Operation	Two Speed (High and Low)
Retracted Height	40 in. (102 cm)
Extended Height	57.5 in. (146.1 cm)
Lifting Capacity (Static)	170,000 lb (77,111 kg)

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued**Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.**

EQUIPMENT	MEASUREMENT/TYPE
Landing Legs - Continued	
Retracted Ground to Shoe Height	24 in. (61 cm)
Side Load per Leg	Up to 20,000 lb (9,072 kg) per leg
Operational Temperature	-65 to 250 °F (-54 to 121 °C)
Enhanced Grease System	Cranking Effort Reduced 10% to 15%
High Gear Ratio	4.5 to 1
Low Gear Ratio	34.4 to 1
Suspension/Trunnion	
Type	Single Point
Model	H 900-50
Springs	Seven per Pack, Two Packs
Leaf Width	5 in. (13 cm)
Capacity	50,000 lb (22,680 kg)
Axle Spacing Sprung	51-1/2 in. (130.8 cm)
Trunnion Centers (TC)	22-1/8 in. (56.4 cm)
Spring Centers (SC)	38 in. (97 cm)
M871R and M871A1R	
Trunnion/Axle Configuration	Overslung (OS) Axles, OS Trunnion
Trunnion Hanger Height	4-1/2 in. (11.4 cm)
Trunnion Bushing	Polyurethane, P/N: 20248-01, Full Orbitration
M871A2R	
Trunnion/Axle Configuration	OS Axles Underslung (US) Trunnion

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued**Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.**

EQUIPMENT	MEASUREMENT/TYPE
Converter/Main Electrical System	
Converter Box (Military)	Solid State
Type of Ground System	Negative
System Voltage	12/24V
Tractor/Semitrailer	Multiplexing Capability
Lighting	
Blackout Lights	24V
Clearance Lights	LED 12/24V
Stop, Turn, Taillights	LED 12/24V
ABS Warning Lights	12V
ABS	
Model	4S/2M
System	Four Wheel Sensors, One Electric Control Unit (ECU), Two Modulators
Diagnostic Tool	Blink Code Adapter
Modulators Valves	One External, One Internal (Part of ECU)
ECU	12V
Manufacturer's Registration Number	Hidden, Stamped Into Front Deck Underside Frame Between Landing Legs

M871R, M871A1R, AND M871A2R EQUIPMENT DATA - Continued**Table 7. M871R, M871A1R, and M871A2R Semitrailer Data - Continued.**

EQUIPMENT	MEASUREMENT/TYPE
Component Weight Data	
Bulkhead	557 lb (253.4 kg)
Landing Leg With Gear	200 lb (90.7 kg)
Landing Leg Without Gear	180 lb (81.6 kg)
Single Wood Deck Board, 360 in. (914.4 cm)	140 lb (63.5 kg)
Complete Decking Kit	1,211 lb (549.3 kg)
Steel Stowage Box	195 lb (88.5 kg)
Stowage Box Side Panel	28 lb (12.7 kg)
Radial Tire	96 lb (43.5 kg)
Steel Wheel	83 lb (37.6 kg)
Radial Tire and Wheel	179 lb (81.2 kg)
Complete Single Point Suspension	1,142 lb (518.0 kg)
Spring Pack (Seven Leafs)	315 lb (142.9 kg)
Dressed Axle Assembly	731 lb (331.6 kg)
Air Brake Chamber	20 lb (9.1 kg)
Air Reservoir Tank	23 lb (10.4 kg)
All Plywood Side Racks, Tarp, and Bows	1,150 lb (521.6 kg)
Side Rack Stake (ea.)	9 lb (4.1 kg)
Bow (ea.)	7 lb (3.2 kg)
Maximum Deck Cargo Weight	45,000 lb (20,412 kg)

END OF WORK PACKAGE

**FIELD MAINTENANCE
THEORY OF OPERATION**

GENERAL

This Work Package (WP) contains the theory of operation of the M871R Series Semitrailer.

ELECTRICAL SYSTEM

Connects to prime mover electrical system to activate the 12 volt or 24 volt system. Includes 12 volt and 24 volt wiring for operating taillights, clearance lights, and Light-Emitting Diode (LED) lights.

BRAKE SYSTEM

Antilock Brake System (ABS) and air brake system for service and emergency operation. Includes air reservoirs, drain valves, gladhands, emergency relay valve, multifunction valve, air brake chambers, lines, fittings, and hoses.

SERVICE BRAKE SYSTEM

Air pressure activates the air chambers, which push the slack adjusters. The slack adjusters turn the camshafts, causing the brake shoes to expand against the brake drum.

SUSPENSION SYSTEM

Includes springs, U-bolts, axles, and trunnion tube for ease of travel on improved and unimproved roads.

END OF WORK PACKAGE

CHAPTER 2

OPERATOR INSTRUCTIONS

WORK PACKAGE INDEX

Title	WP Sequence No.
DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS.....	WP 0004
OPERATION UNDER USUAL CONDITIONS.....	WP 0005
OPERATION UNDER UNUSUAL CONDITIONS.....	WP 0006
OPERATION WITH AIR BRAKE FAILURE (CAGING AIR BRAKE CHAMBERS)	WP 0007

OPERATOR MAINTENANCE
DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

CAUTION

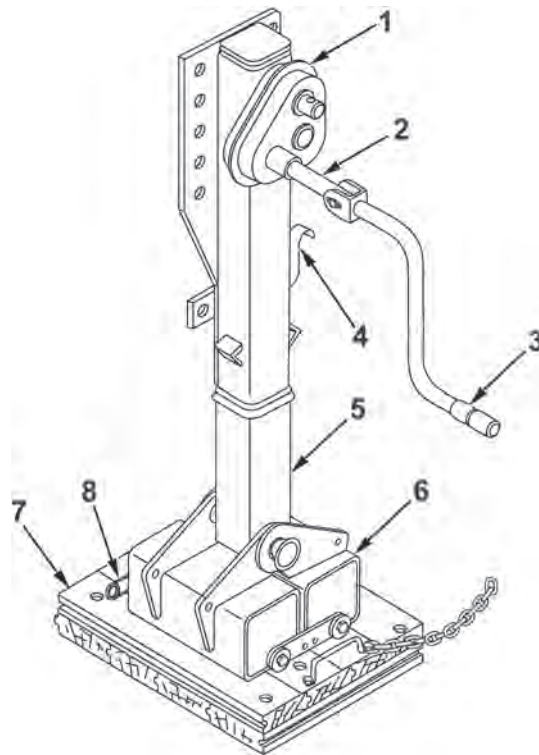
- **Fording:** Antilock Brake System (ABS) Electronic Control Unit (ECU) must not be submerged in water. Rain, sleet, or snow will not affect operation of ECU. Failure to comply may result in equipment damage.
- **Fording:** Immediately after fording, apply service brakes to expel water from air brake chamber. If fording in salt water, flush chambers with fresh low-pressure water when mission allows. Failure to comply may result in equipment damage.
- **Fording:** DO NOT exceed fording depth of 30 in. (76.2 cm). Failure to comply may result in equipment damage.

GENERAL

This Work Package (WP) shows the location and describes the function of all controls and indicators. Review this thoroughly before operating the semitrailer.

NOTE

Light Discipline: For light discipline mission requirements, DO NOT change, remove, or disable the electrical system wiring, lighting, or reflectors. Use duct tape to cover the lens on the ABS warning light and reflectors as needed to meet mission requirements.

Table 1. Landing Leg.**Figure 1. Landing Leg.**

Key	Control/Indicator	Function
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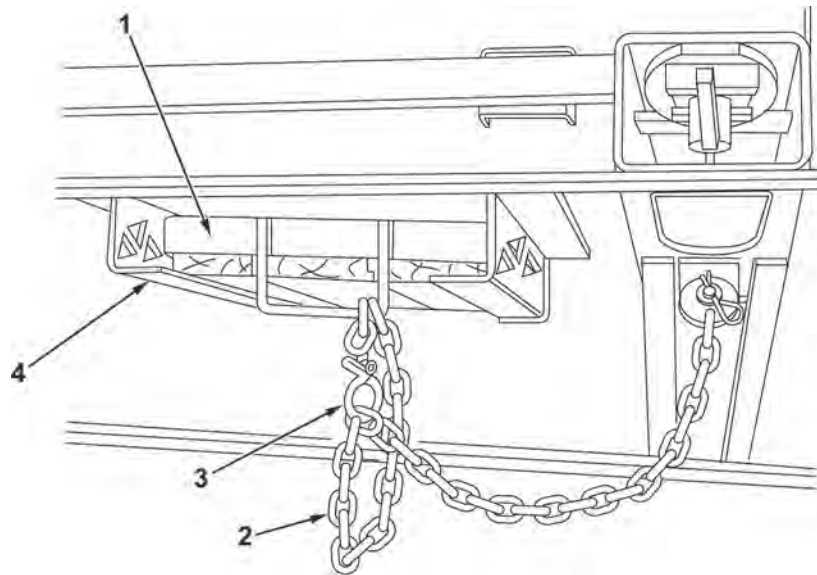
WARNING

Ensure landing leg scissor assembly's retaining (hitch) pins are installed extending inward. If installed extending outward, they will be a contact hazard. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1	Landing Gear Box	Allows the semitrailer to be mechanically raised or lowered.
2	Operating Shaft	When pushed in, engages low-speed gear to easily and quickly raise or lower landing legs. When pulled out, engages high-speed gear to raise or lower landing legs.

Table 1. Landing Leg - Continued.

Key	Control/Indicator	Function
3	Hand Crank	Operates the landing gear. Turning the hand crank clockwise lowers landing legs for parking semitrailer. Counterclockwise rotation raises legs to towing position.
4	Crank Stow Bracket	Holds hand crank when not in use.
5	Landing Leg	Supports semitrailer when it is unhooked from the prime mover.
6	Landing Leg Shoe	Keeps landing leg from sinking into the ground.
7	Ground Board Assembly	Placed under landing leg feet, keep them from sinking into soft ground. May also be used under axle jack.
8	Retaining Pins	Lock landing leg shoes in up or down position.

Table 2. Ground Board Assembly.**Figure 2. Ground Board Assembly.**

Key	Control/Indicator	Function
1	Ground Boards (two)	Placed under landing leg feet, keep them from sinking into soft ground. May also be used under axle jack.
2	Ground Board Chain	Hooked on frame, holds ground boards to semitrailer to prevent losing ground boards.
3	Snap Hook	Takes up slack in ground board chain.
4	Brackets	Welded to frame, hold ground boards for storage.

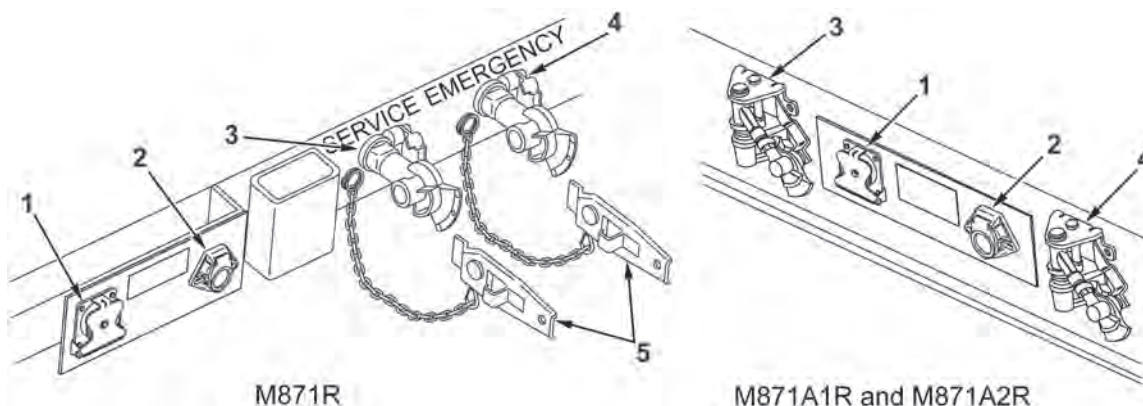
Table 3. Air Lines and Electrical Cables Connections.

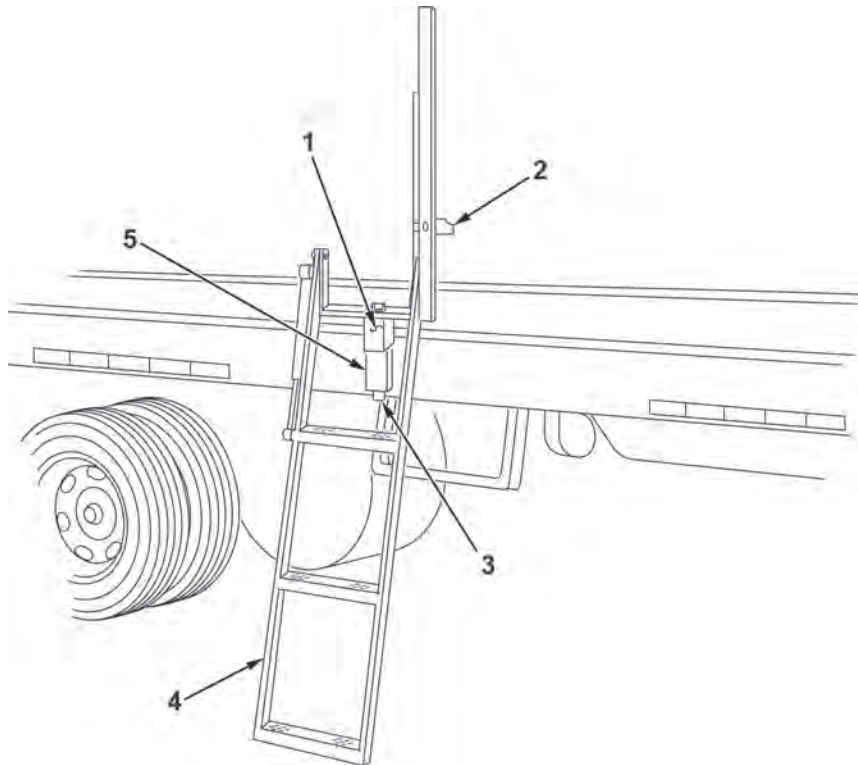
Figure 3. Air Lines and Electrical Cables Connections.

Key	Control/Indicator	Function
1	Curbside Electrical Receptacle	Provides the connections between the semitrailer lights and the prime mover electrical system. Receptacle has spring-loaded cover to keep foreign matter out when the cables are disconnected. The curbside receptacle is for 24 volt.
2	Roadside Electrical Receptacle	Provides the connections between the semitrailer lights and the prime mover electrical system. Receptacle has spring-loaded cover to keep foreign matter out when the cables are disconnected. The roadside receptacle is for 12 volt.

WARNING

Service air can be identified by blue markings on gladhand; emergency air can be identified by red markings on gladhand. DO NOT cross service or emergency air lines at gladhands. Ensure they are hooked up correctly to meet brake air pressure requirements. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

3	Service Gladhand Coupling	Provides the connection between the semitrailer brake system and the prime mover air supply system.
4	Emergency Gladhand Coupling	Provides the connection between the semitrailer brake system and the prime mover air supply system.

Table 4. Ladder.**Figure 4. Ladder.**

Key	Control/Indicator	Function
1	Bracket	Supports the ladder.
2	Lever	Pulled down to lower or raise stairs to install or remove ladder.
3	Handle	Used to tighten stem after installing ladder onto bracket and to loosen stem before removing ladder from bracket.
4	Ladder	Provides easy access to deck of semitrailer.
5	Stem	Inserted into bracket and tightened using handle.

END OF WORK PACKAGE

OPERATOR MAINTENANCE OPERATION UNDER USUAL CONDITIONS

INITIAL SETUP:

Personnel Required
(2)

References (cont.)

Prime Mover Technical Manual
WP 0020

References

DA PAM 75-5

PREPARATION FOR USE

1. Perform all BEFORE Preventive Maintenance Checks and Services (PMCS) (WP 0020) before operating semitrailer.
2. Review all prime mover operating instructions before coupling or uncoupling the semitrailer.

END OF TASK

USE OF CHOCK BLOCKS

WARNING



Chock wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

1. If semitrailer is parked on level surface and neither side of semitrailer needs to be raised, place one chock block (Figure 1, Item 1) in front of one wheel, and place another chock block (Figure 1, Item 1) in back of other wheel.

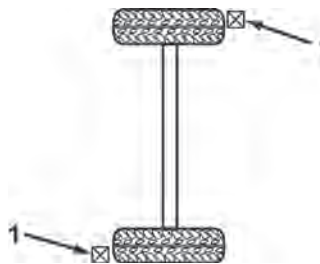


Figure 1. Chock Block Placement on Level Surface With Neither Side of Semitrailer Raised.

USE OF CHOCK BLOCKS - Continued

2. If semitrailer is parked on level surface and one side of semitrailer needs to be raised, place chock blocks (Figure 2, Item 1) in front and back of wheel remaining on ground.

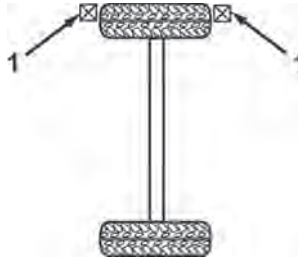


Figure 2. Chock Block Placement on Level Surface With One Side of Semitrailer Raised.

3. If semitrailer is parked on incline with front of semitrailer facing uphill, place chock blocks (Figure 3, Item 1) in back of both wheels.

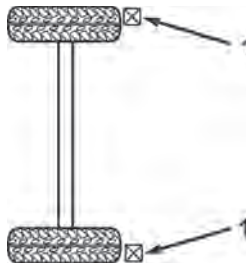
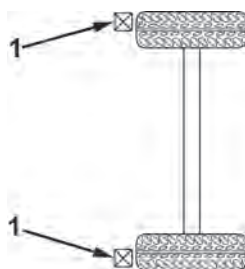


Figure 3. Chock Block Placement on Incline With Front of Semitrailer Facing Uphill.

4. If semitrailer is parked on incline with front of semitrailer facing downhill, place chock blocks (Figure 4, Item 1) in front of both wheels.



M1102006E

Figure 4. Chock Block Placement on Incline With Front of Semitrailer Facing Downhill.

END OF TASK

ALIGNING SEMITRAILER WITH PRIME MOVER**WARNING**

- DO NOT tow the semitrailer with the M52, M52A1, or M52A2 prime mover. The inherent design capabilities of the M52 series are not compatible with the semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Ensure all personnel stand clear of the prime mover and semitrailer during coupling operations. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

NOTE

- The semitrailer can be towed by the M915 for improved highway use only, or by the M818, M878, M931, M932, and M1088 series for either highway or off-road use.
 - See prime mover Technical Manual (TM) for maximum payload capacities and/or restrictions.
1. Align prime mover with semitrailer kingpin (Figure 5, Item 4).
 2. Slowly back prime mover into position. Ensure semitrailer kingpin (Figure 5, Item 4) is in line with fifth wheel coupler jaws (Figure 5, Item 2) on prime mover.
 3. Stop prime mover just before kingpin plate (Figure 5, Item 3) of semitrailer starts to ride up approach ramps (Figure 5, Item 1) of prime mover.

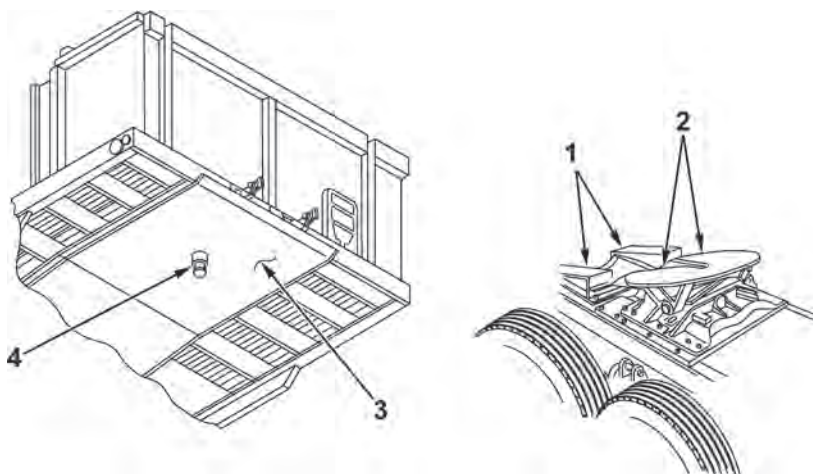


Figure 5. Prime Mover Alignment.

END OF TASK

CONNECTING INTERVEHICULAR HOSES**WARNING**

Service air can be identified by blue markings on gladhand; emergency air can be identified by red markings on gladhand. DO NOT cross service or emergency air lines at gladhands. Ensure they are hooked up correctly to meet brake air pressure requirements. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

1. Connect two air hoses marked SERVICE and EMERGENCY on prime mover to corresponding air hose gladhands (Figure 6, Items 1 and 2).
2. Open air line shutoff valves on prime mover.
3. If no air leakage is detected, apply brakes on semitrailer from prime mover.

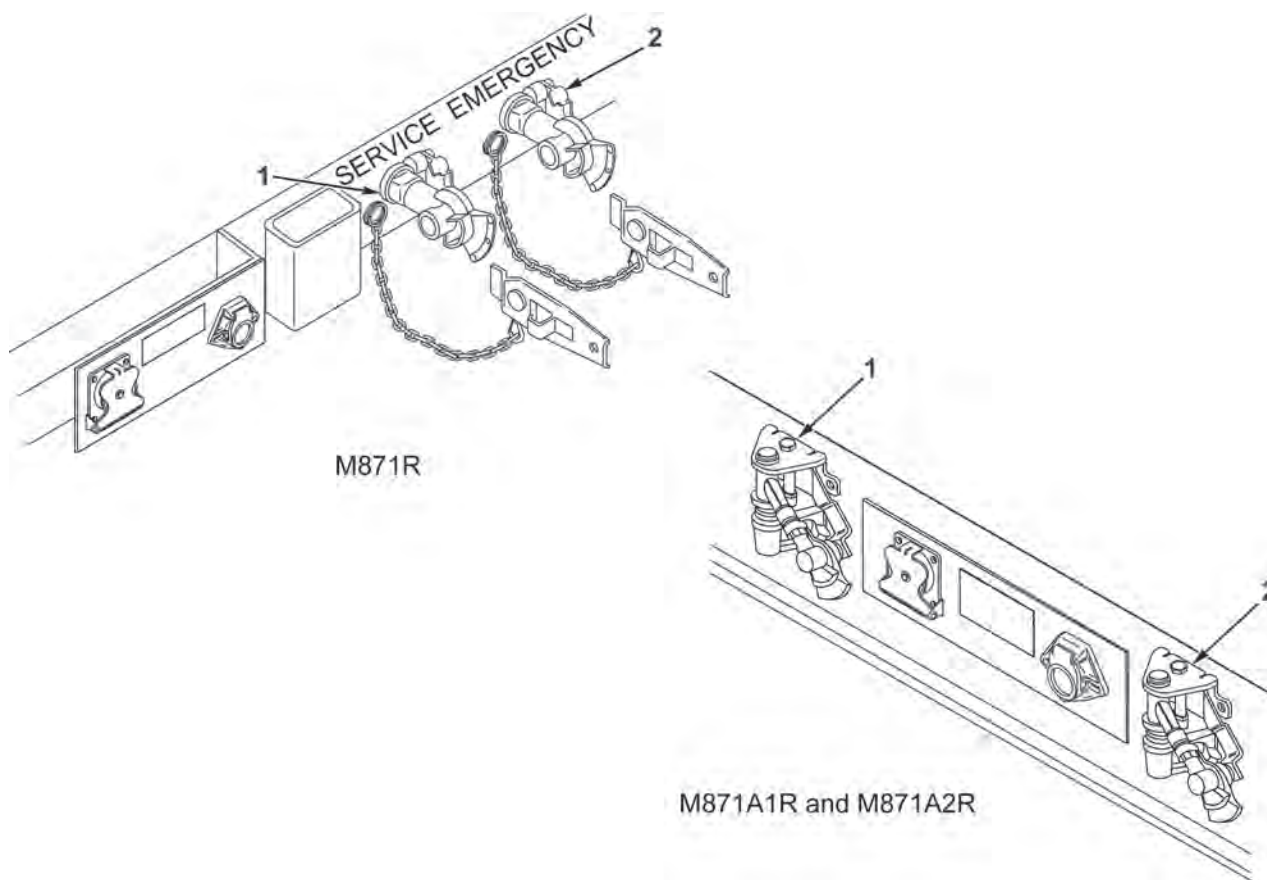


Figure 6. Air Hoses.

END OF TASK

COUPLING SEMITRAILER TO PRIME MOVER

1. Ensure kingpin plate (Figure 7, Item 4) is above approach ramps (Figure 7, Item 1). Adjust height as needed by using landing legs. Ensure prime mover fifth wheel coupler jaws (Figure 7, Item 2) are open.

WARNING



CHECK THE PRIME MOVER'S TECHNICAL MANUAL (TM) FOR ANY FIFTH WHEEL ADJUSTMENTS REQUIRED FOR HIGHWAY, SECONDARY, OFF-ROAD, AND CROSS-COUNTRY OPERATIONS. The M818, M931, and M932 series tractors require that fifth wheel wedges must be in the locked-in (pushed-in) mode for highway and secondary road use and in the locked-out (pulled-out) mode for cross-country operation. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

2. Slowly back prime mover until coupler jaws (Figure 7, Item 2) engage kingpin (Figure 7, Item 5).
3. Visually check coupling. You should not be able to see light between fifth wheel (Figure 7, Item 3) and kingpin plate (Figure 7, Item 4).

CAUTION

If coupling operation is not completed and another attempt is to be made, pull prime mover forward carefully. DO NOT exceed limits of air hoses and electrical cable. Failure to comply may result in equipment damage.

4. Check coupling by carefully inching prime mover forward. If coupling is not locked, rock prime mover back and forth slowly until kingpin (Figure 7, Item 5) is locked in fifth wheel coupler jaws (Figure 7, Item 2).

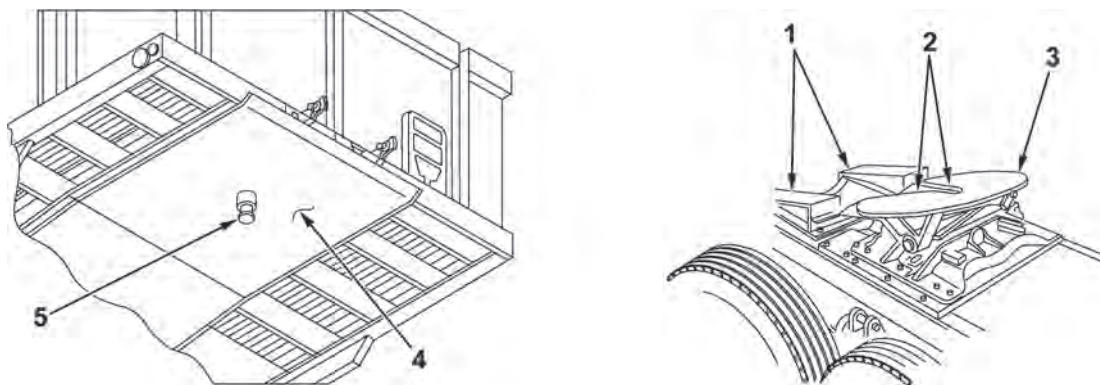


Figure 7. Prime Mover Coupling.

COUPLING SEMITRAILER TO PRIME MOVER - Continued

NOTE

Refer to Figures 8 and 9 for additional coupling instructions.

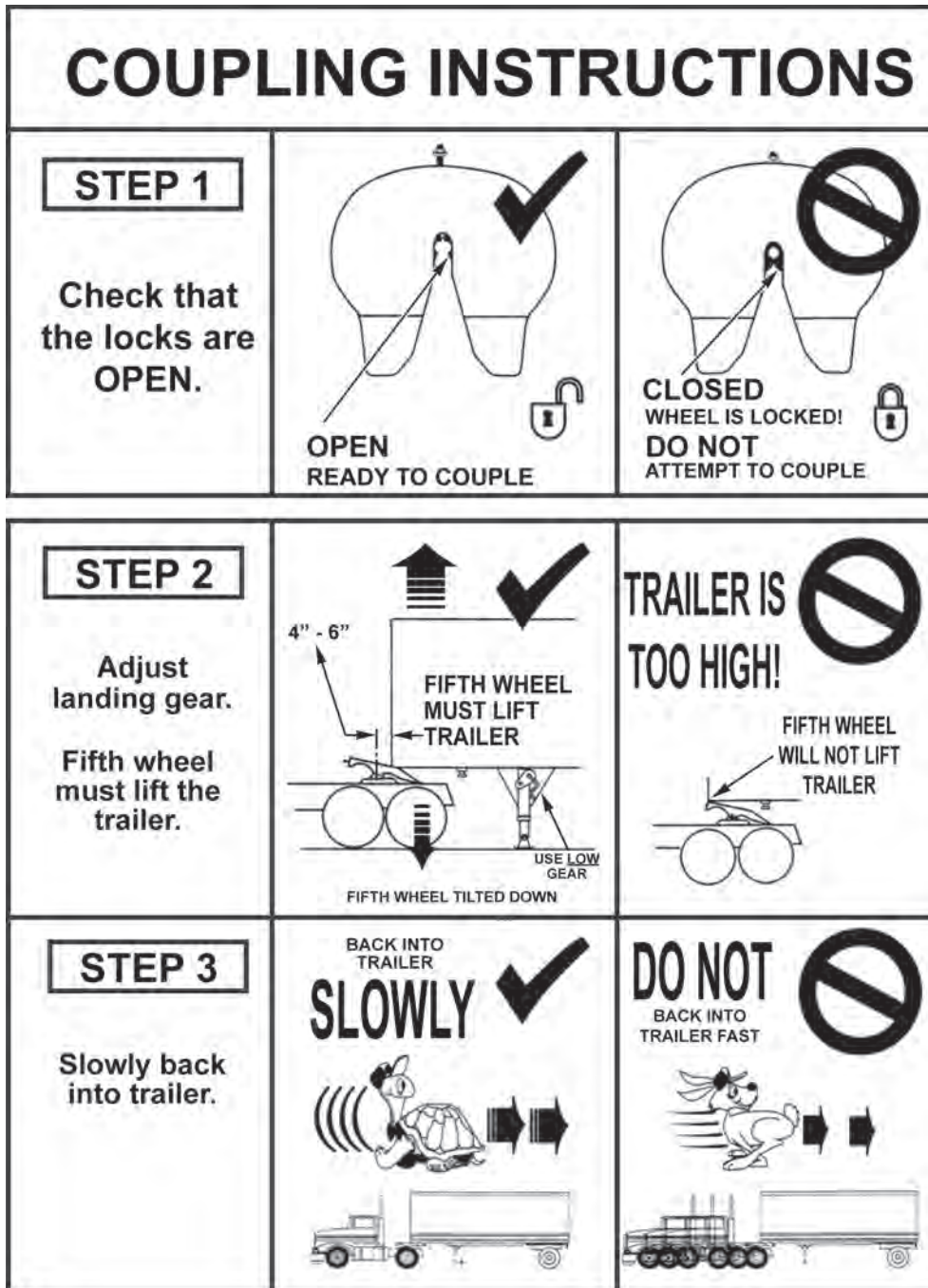


Figure 8. Coupling Instructions, Steps 1 Through 3.

COUPLING SEMITRAILER TO PRIME MOVER - Continued

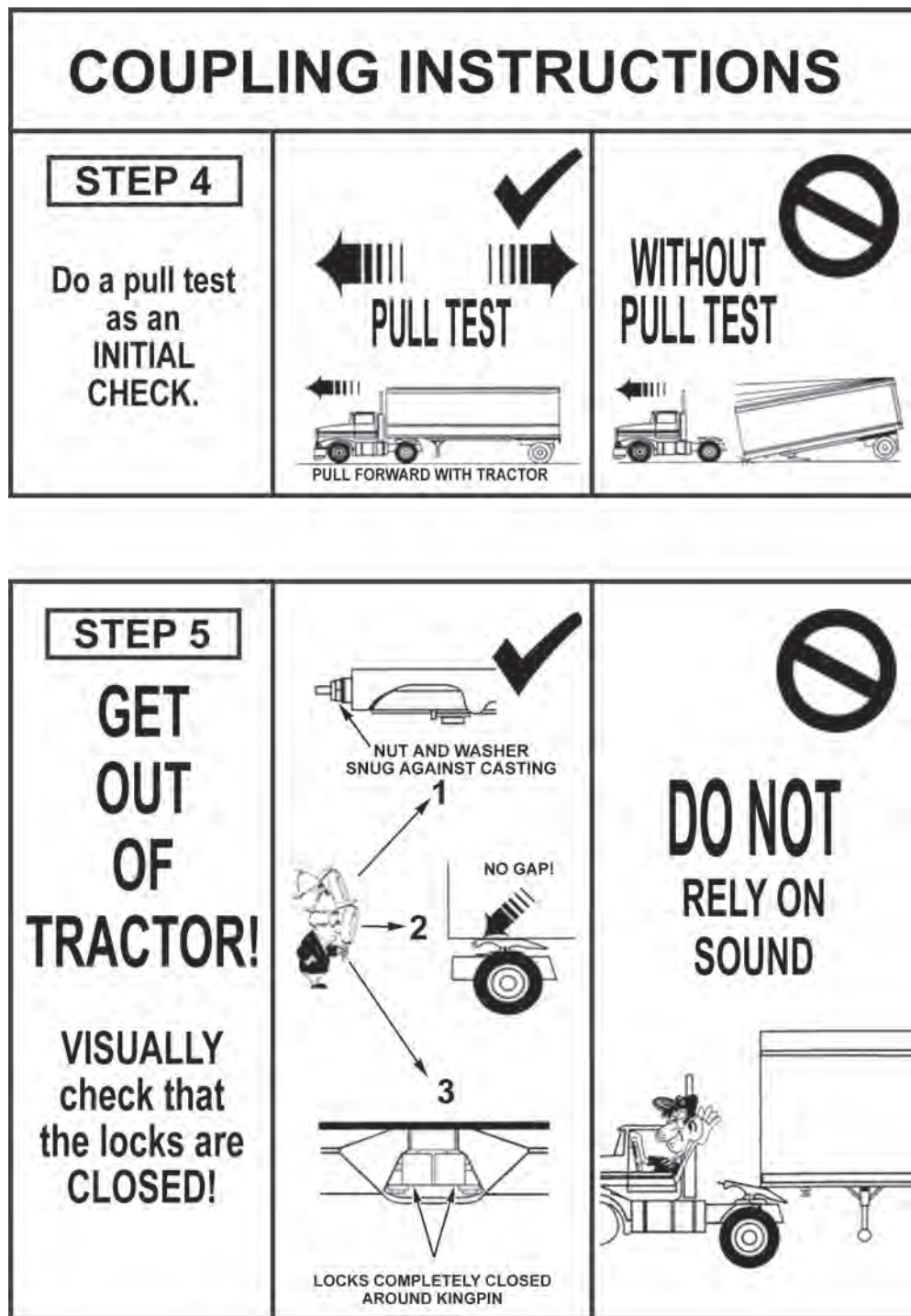


Figure 9. Coupling Instructions, Steps 4 and 5.

END OF TASK

CONNECTING INTERVEHICULAR CABLE**CAUTION**

The semitrailer's converter box and electrical system will be damaged if the 12-volt (7-pin) and 24-volt (12-pin) cables are plugged in at the same time. DO NOT plug in both the 12-volt (7-pin) and 24-volt (12-pin) cables at the same time. Failure to comply may result in equipment damage.

1. Open cover on receptacle (Figure 10, Item 1 or 2).
2. Align slot on cable plug with aligning key of receptacle (Figure 10, Item 1 or 2).
3. Push cable plug into matching receptacle (Figure 10, Item 1 or 2), and release receptacle cover.
4. Operate lights from prime mover to ensure lights are in working order.
5. Check air lines and intervehicular cable to ensure they are supported and will not catch or chafe.
6. Recheck fifth-wheel-to-kingpin locking by trying to move prime mover and semitrailer forward.

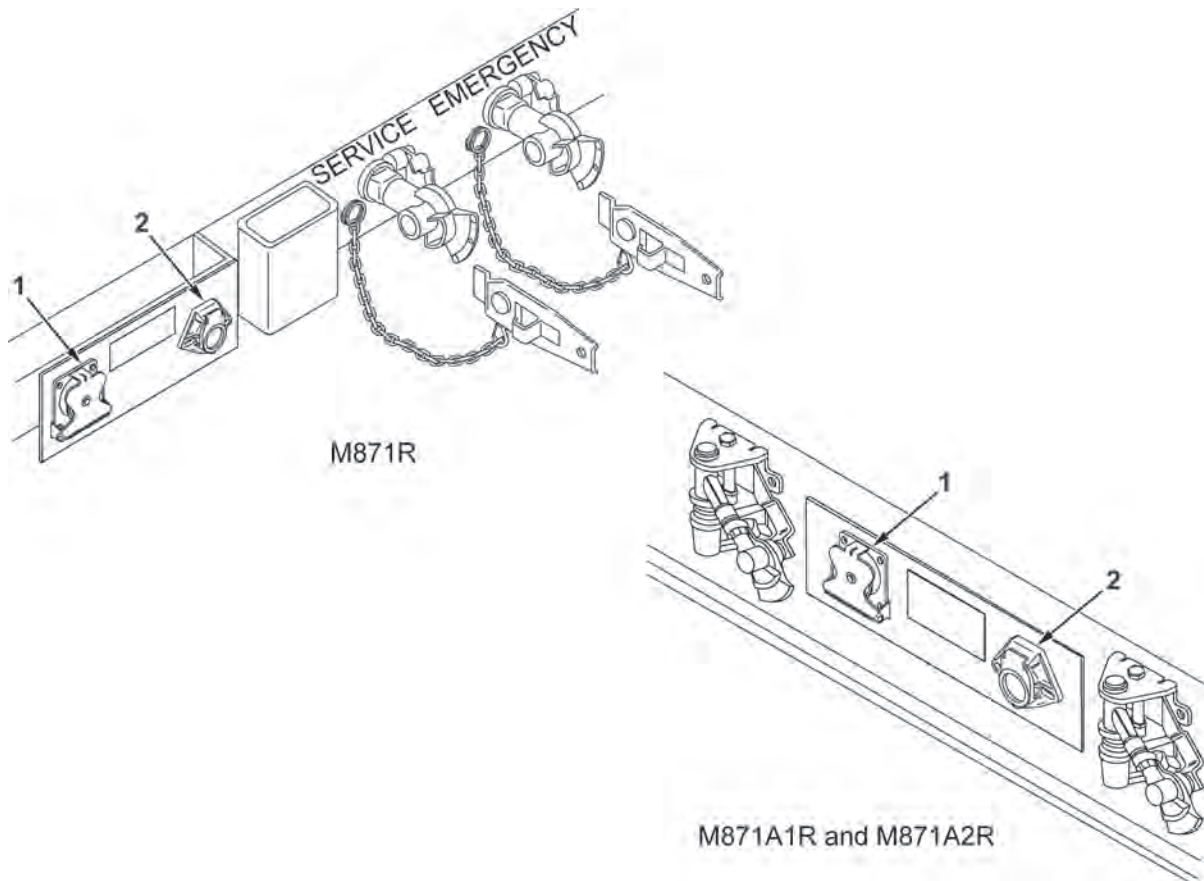


Figure 10. Cables.

END OF TASK

RAISING LANDING LEGS**WARNING**

Ensure landing leg scissor assembly's retaining (hitch) pins are installed extending inward. If installed extending outward, they will be a contact hazard. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1. Lift crank (Figure 11, Item 1) from crank hanger (Figure 11, Item 2).
2. Raise crank (Figure 11, Item 1) to operating position. Pull crank (Figure 11, Item 1) out for high-speed operation when trailer is unloaded. Push crank (Figure 11, Item 1) in for low-speed operation when trailer is loaded with cargo.
3. Turn crank (Figure 11, Item 1) counterclockwise until legs (Figure 11, Item 3) are retracted fully.
4. Lower crank (Figure 11, Item 1) and secure in crank hanger (Figure 11, Item 2).
5. Remove and stow ground boards (Figure 11, Item 4), if used.

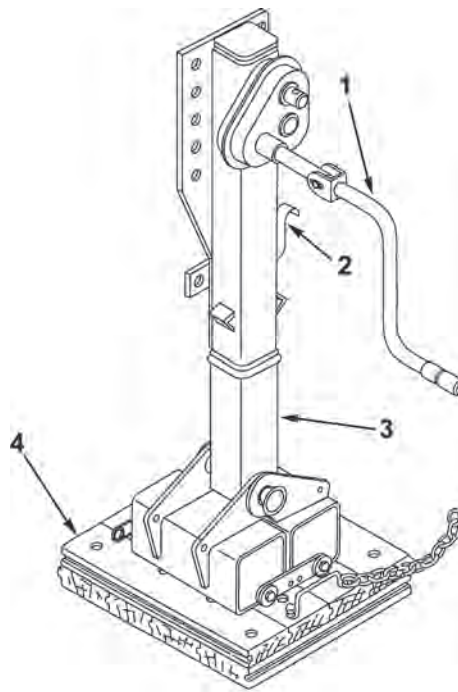


Figure 11. Landing Leg.

END OF TASK

STOWING GROUND BOARDS**WARNING**

Watch hands and fingers when removing and installing ground boards. Hands and fingers may be pinched or cut. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1. Position ground board (Figure 12, Item 1) in brackets (Figure 12, Item 2) with handle (Figure 12, Item 5) down.
2. Connect center snap hook (Figure 12, Item 4) to S-hook (Figure 12, Item 3).

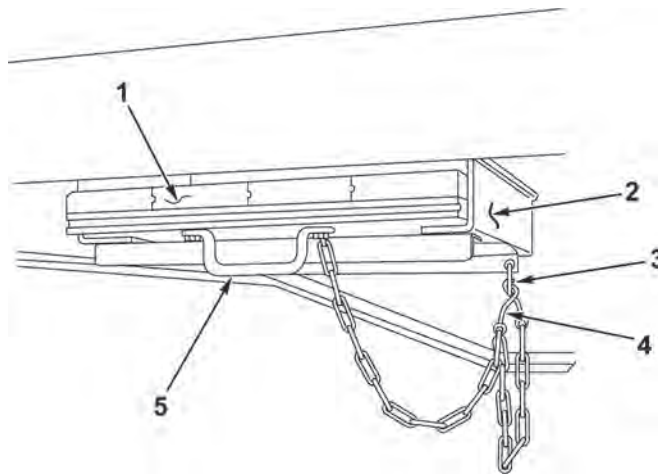


Figure 12. Ground Boards.

END OF TASK**LOADING SEMITRAILER (CONTAINERIZED CARGO) (M871R AND M871A1R)****WARNING**

DO NOT place any part of your body under a container during the loading or unloading operation. Container may crush, pinch, or pin any body part that is under a container. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

1. Release handle (Figure 13, Item 3) from latch (Figure 13, Item 2). Push twistlock (Figure 13, Item 1) up.

LOADING SEMITRAILER (CONTAINERIZED CARGO) (M871R AND M871A1R) - Continued

2. Turn handle (Figure 13, Item 3) clockwise 90 degrees to rotate twistlock bayonet (Figure 13, Item 4) into loading position.
3. Repeat Steps 1 and 2 for three remaining twistlocks.
4. Load cargo container on semitrailer.
5. Check mating of twistlock bayonet (Figure 13, Item 4) and container fitting.
6. Turn handle (Figure 13, Item 3) clockwise 90 degrees to rotate twistlock bayonet (Figure 13, Item 4) into locked position.
7. Secure handle (Figure 13, Item 3) with latch (Figure 13, Item 2).
8. Repeat Steps 6 and 7 for three remaining twistlocks.

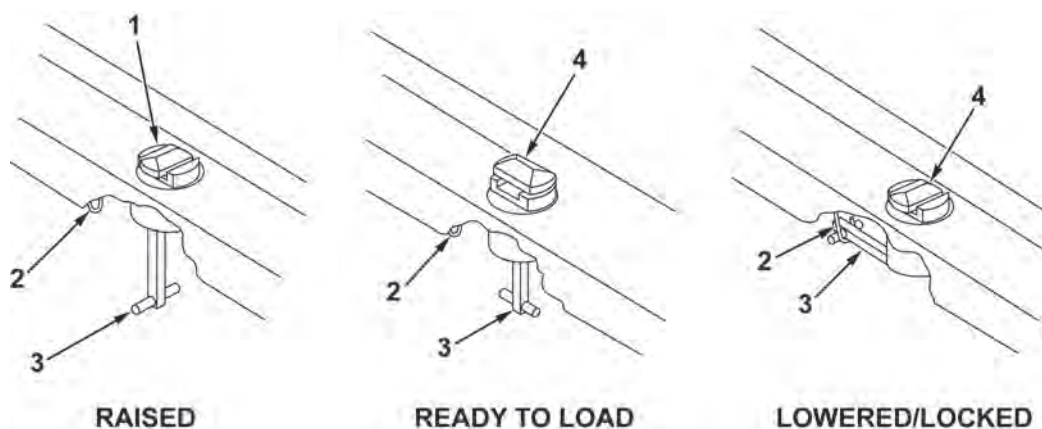


Figure 13. Twistlock Operation (M871R and M871A1R).

WARNING

- DO NOT tow the semitrailer with an unsecured cargo container. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- When transporting the 8.5 ft (2.6 m) commercial container, the prime mover's fifth wheel height must not exceed 4.2 ft (1.28 m) to comply with the 13.12 ft (4 m) overall height limit for United States Army, Europe (USAREUR). The M915 fifth wheel height meets this requirement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

9. Visually ensure container is securely locked.

END OF TASK

LOADING SEMITRAILER (CONTAINERIZED CARGO) (M871A2R)**WARNING**

DO NOT place any part of your body under a container during the loading or unloading operation. Container may crush, pinch, or pin any body part that is under a container. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

1. Pull elastic strap (Figure 14, Item 3) from eye bolt (Figure 14, Item 4), and lower handle (Figure 14, Item 2). Push twistlock (Figure 14, Item 1) up.
2. Turn handle (Figure 14, Item 2) clockwise 90 degrees to rotate twistlock bayonet (Figure 14, Item 5) into loading position.
3. Repeat Steps 1 and 2 for three remaining twistlocks.
4. Load cargo container on semitrailer.
5. Check mating of twistlock bayonet (Figure 14, Item 5) and container fitting.
6. Turn handle (Figure 14, Item 2) clockwise 90 degrees to rotate twistlock bayonet (Figure 14, Item 5) into locked position.
7. Raise handle (Figure 14, Item 2), and secure elastic strap (Figure 14, Item 3) in eye bolt (Figure 14, Item 4).
8. Repeat Steps 7 and 8 for three remaining twistlocks.

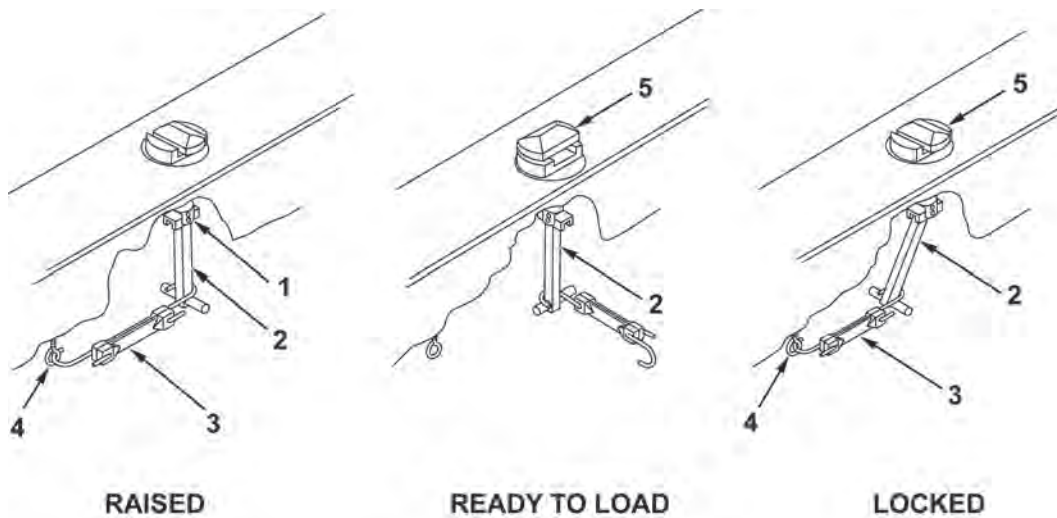


Figure 14. Twistlock Operation (M871A2R).

LOADING SEMITRAILER (CONTAINERIZED CARGO) (M871A2R) - Continued**WARNING**

- DO NOT tow the semitrailer with an unsecured cargo container. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- When transporting the 8.5 ft (2.6 m) commercial container, the prime mover's fifth wheel height must not exceed 4.2 ft (1.28 m) to comply with the 13.12 ft (4 m) overall height limit for United States Army, Europe (USAREUR). The M915 fifth wheel height meets this requirement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

9. Visually ensure container is securely locked.

END OF TASK**LOADING SEMITRAILER (AMMUNITION CARGO)****Wooden Dunnage Restraint****NOTE**

- For specific ammunition loading, tiedown, restraint, and transport guidance, refer to U.S. Army Materiel Command 19-48 series tactical vehicle outloading drawings. These drawings are listed in DA PAM 75-5.
- Loose Projectile Restraint System (LPRS) is a system that provides a fast, simple method of securing loose, unfused 155 mm projectiles for transport in field artillery companion vehicles. These egg crate module racks may be assembled in 9 round, 15 round, and 25 round sets and are restrained in cargo bed by authorized tiedown straps. Refer to prime mover technical manual for complete instructions.

1. Install side rail hole cover plates, side panels, and side stakes on one side of semitrailer.
2. Install nailed-down or floating dunnage (blocking and bracing), as appropriate, within semitrailer.
3. Load ammunition cargo.
4. Install remaining blocking and bracing.
5. Install remaining side rail hole cover plates, side panels, and side stakes.
6. Install quick release pins at bottom of panels.
7. Install the four cross chains.

END OF TASK

TOWING SEMITRAILER**WARNING**

- CHECK THE PRIME MOVER'S TECHNICAL MANUAL (TM) FOR ANY FIFTH WHEEL ADJUSTMENTS REQUIRED FOR HIGHWAY, SECONDARY, OFF-ROAD, AND CROSS-COUNTRY OPERATIONS. The M818, M931, and M932 series tractors require that fifth wheel wedges must be in the locked-in (pushed-in) mode for highway and secondary road use and in the locked-out (pulled-out) mode for cross-country operation. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Extreme caution must be exercised in all turns, curves, and highway cloverleafs when towing a high-center-of-gravity, containerized load as containerized load may fall off semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Under no circumstances shall speeds exceed the following:
 - Highway: 55 mph (89 kph)
 - Secondary: 35 mph (56 kph)
 - Trails: 15 mph (24 kph)
 - Rough: 10 mph (16 kph)

Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

TOWING SEMITRAILER - Continued

Driving

When driving prime mover and semitrailer, overall length of unit must be kept in mind when passing other vehicles and when turning. Because unit is hinged in middle, backing is also affected. Semitrailer's payload will affect stopping and off-road maneuverability.

Turning

When turning corners, allow for semitrailer wheels turning inside the radius of prime mover. Make a right turn by driving prime mover about halfway into intersection, then cutting sharply to right. This will keep the semitrailer off curb (Figure 15).

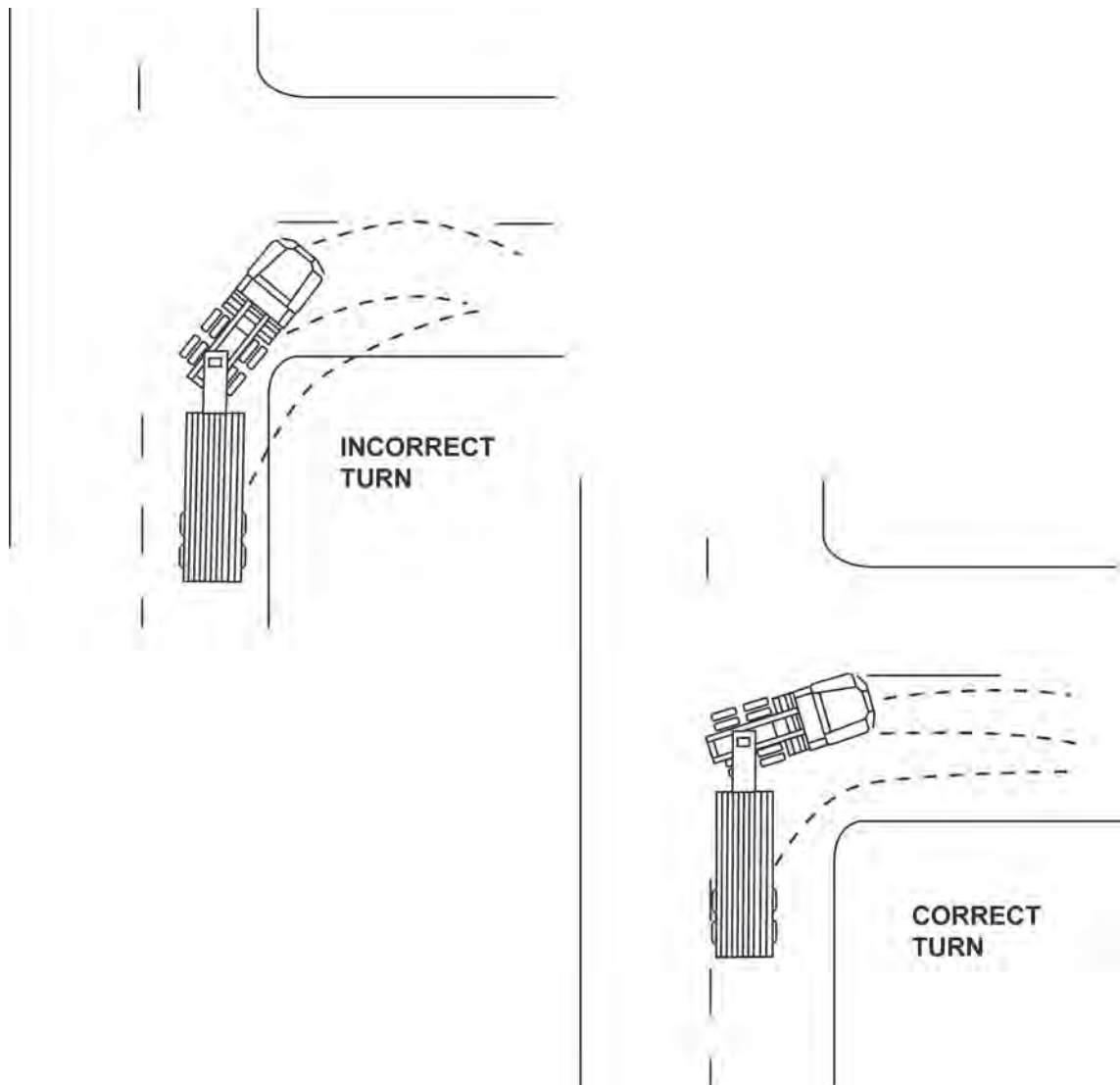


Figure 15. Turning.

TOWING SEMITRAILER - Continued

Stopping

During normal operation, apply brakes of prime mover and semitrailer at same time by stepping on brake pedal. Brake pressure should be applied gradually and smoothly. Semitrailer brakes can be applied separately by using semitrailer handbrake control lever on steering column. On steep downgrades or slippery surfaces, slowly apply semitrailer brakes using semitrailer handbrake control lever before applying prime mover brakes. This will reduce the possibility of jackknifing semitrailer.

Parking

When prime mover and semitrailer are to be parked and left unattended, set parking brake on prime mover and apply brakes on semitrailer. Turn off prime mover engine before leaving cab. Block semitrailer wheels with chock blocks.

Backing

When backing, use helper as ground guide. Adjust rear-view mirrors before backing. When backing, rear of semitrailer will move in opposite direction from prime mover front wheels. If the wheels are turned to the right, semitrailer will go left. If wheels are turned left, semitrailer will go right (Figure 16).

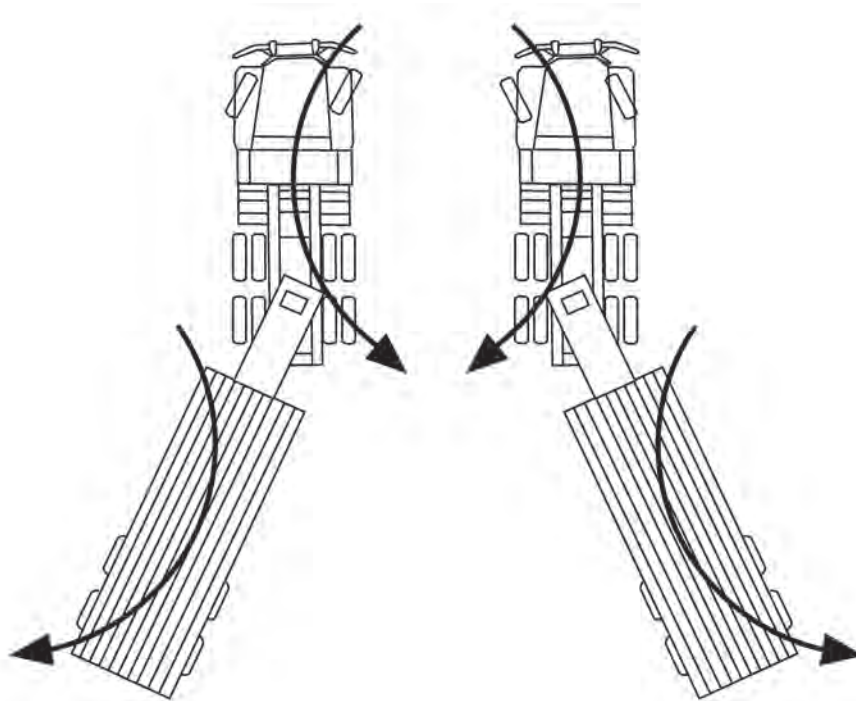


Figure 16. Backing.

END OF TASK

UNLOADING SEMITRAILER (CONTAINERIZED CARGO) (M871R AND M871A1R)**WARNING**

DO NOT place any part of your body under a container during the loading or unloading operation. Container may crush, pinch, or pin any body part that is under a container. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

1. Release handle (Figure 17, Item 3) from latch (Figure 17, Item 4).
2. Turn handle (Figure 17, Item 3) counterclockwise 90 degrees to rotate twistlock bayonet (Figure 17, Item 1).
3. Repeat Steps 1 and 2 for three remaining twistlocks.
4. Unload cargo container from semitrailer.
5. Turn handle (Figure 17, Item 3) counterclockwise 90 degrees, and lower twistlock (Figure 17, Item 2).
6. Secure handle (Figure 17, Item 3) to latch (Figure 17, Item 4).
7. Repeat Steps 5 and 6 for three remaining twistlocks.

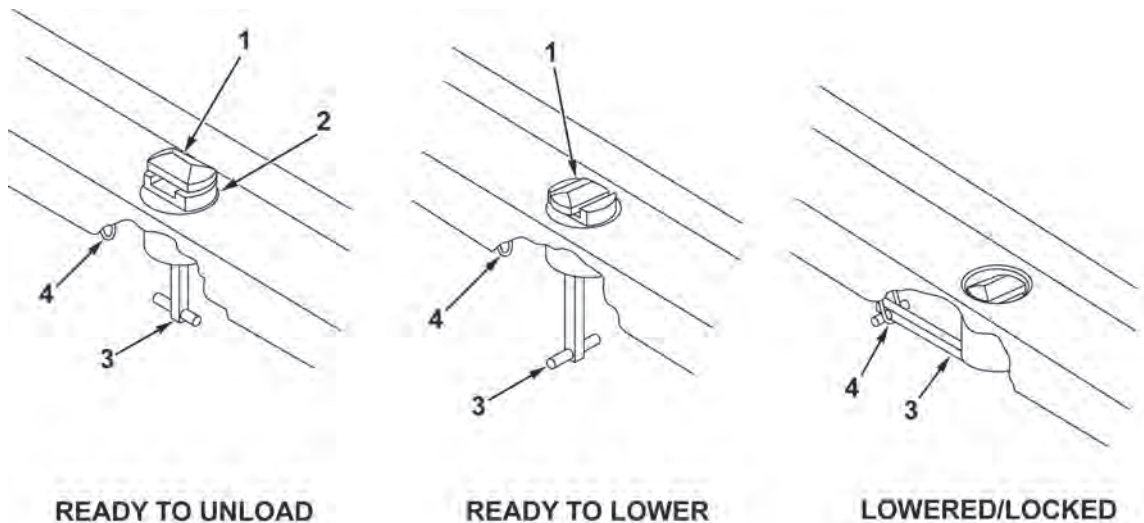


Figure 17. Twistlock Operation (M871R and M871A1R).

END OF TASK

UNLOADING SEMITRAILER (CONTAINERIZED CARGO) (M871A2R)**WARNING**

DO NOT place any part of your body under a container during the loading or unloading operation. Container may crush, pinch, or pin any body part that is under a container. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

1. Pull elastic strap (Figure 18, Item 3) from eye bolt (Figure 18, Item 5).
2. Turn handle (Figure 18, Item 4) counterclockwise 90 degrees to rotate twistlock bayonet (Figure 18, Item 1) to unloading position.
3. Repeat Steps 1 and 2 for three remaining twistlocks.
4. Unload cargo container from semitrailer.
5. Turn handle (Figure 18, Item 4) counterclockwise 90 degrees, and lower twistlock assembly (Figure 18, Item 2) to stowed position.
6. Raise handle (Figure 18, Item 4), and secure elastic strap (Figure 18, Item 3) in eye bolt (Figure 18, Item 5).
7. Repeat Steps 5 and 6 for three remaining twistlocks.

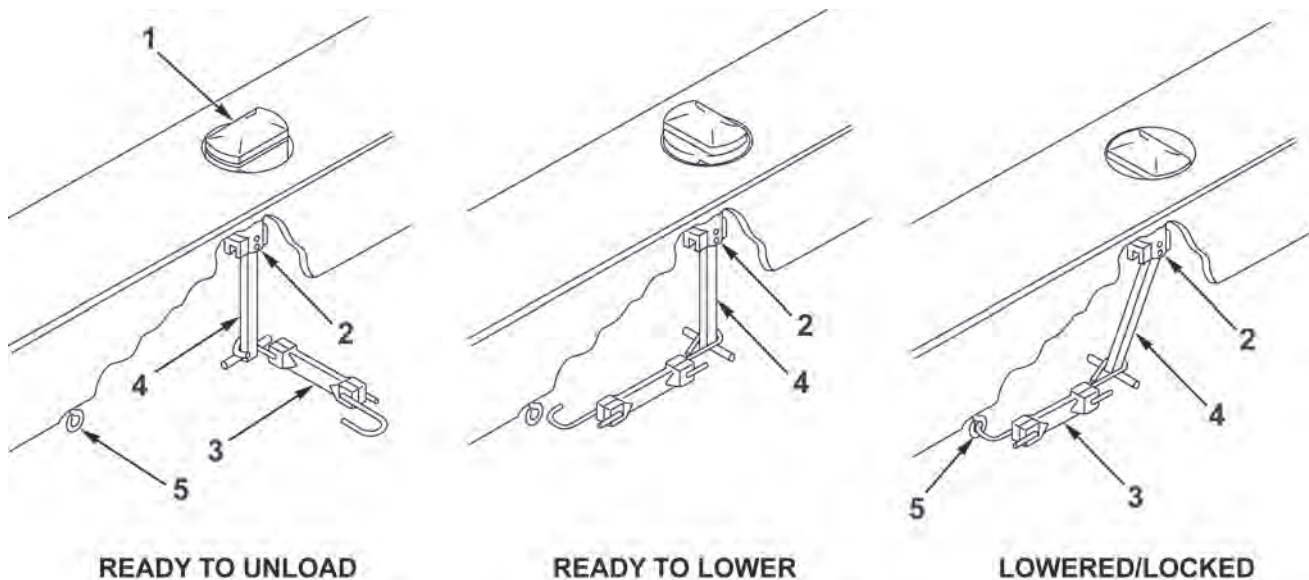


Figure 18. Twistlock Operation (M871A2R).

END OF TASK

LOWERING LANDING LEGS**WARNING**

- Watch hands and fingers when removing and installing ground boards. Hands and fingers may be pinched or cut. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Ensure landing leg scissor assembly's retaining (hitch) pins are installed extending inward. If installed extending outward, they will be a contact hazard. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

Park semitrailer with bulkhead end slightly elevated to allow any water to run off.

1. If ground is soft, position ground boards (Figure 19, Item 4) under sand shoes of legs (Figure 19, Item 3).
2. Lift crank (Figure 19, Item 1) from crank hanger (Figure 19, Item 2).
3. Raise crank (Figure 19, Item 1) to operating position. Push crank (Figure 19, Item 1) in for low-speed operation.
4. Turn crank (Figure 19, Item 1) clockwise until legs (Figure 19, Item 3) are extended.
5. Lower crank (Figure 19, Item 1) and secure in crank hanger (Figure 19, Item 2).

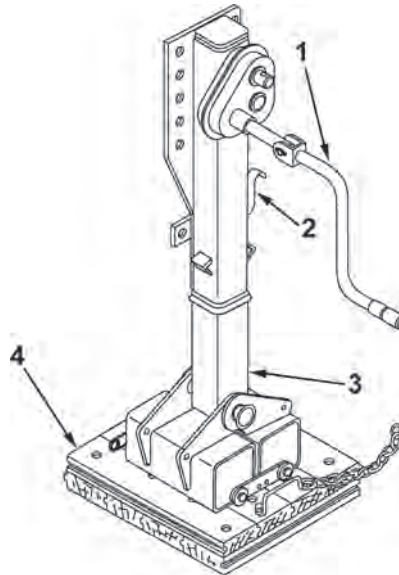


Figure 19. Landing Leg.

END OF TASK

UNCOUPLING SEMITRAILER FROM PRIME MOVER

1. At prime mover, close air line shutoff valves.
2. Disconnect two air hoses from air hose gladhands (Figure 20, Items 3 and 4) on semitrailer. If applicable, install dummy couplings (Figure 20, Item 5).
3. Open cover on receptacle (Figure 20, Item 1 or 2), pull intervehicular cable plug from receptacle (Figure 20, Item 1 or 2), and release cover.

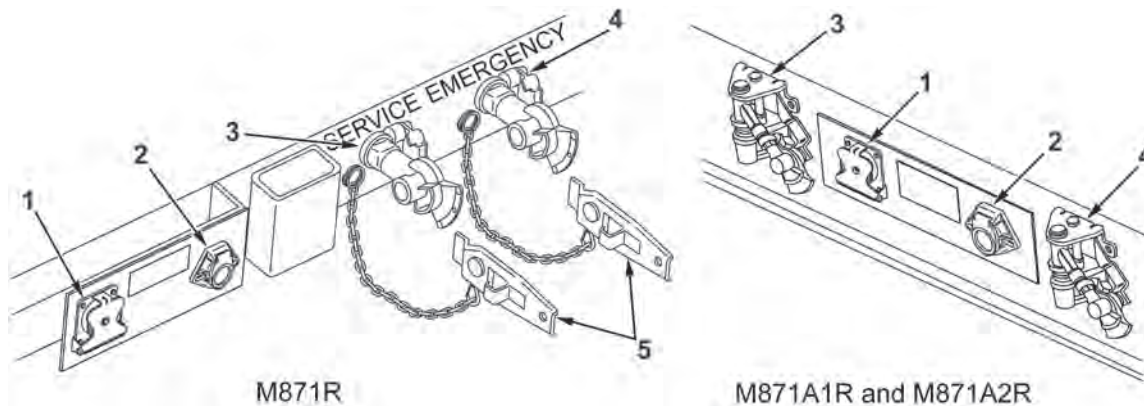


Figure 20. Uncoupling Semitrailer.

4. At prime mover, open fifth wheel coupler jaws (Figure 21, Item 2) to release semitrailer kingpin.
5. Slowly drive prime mover forward until semitrailer is clear of approach ramps (Figure 21, Item 1).

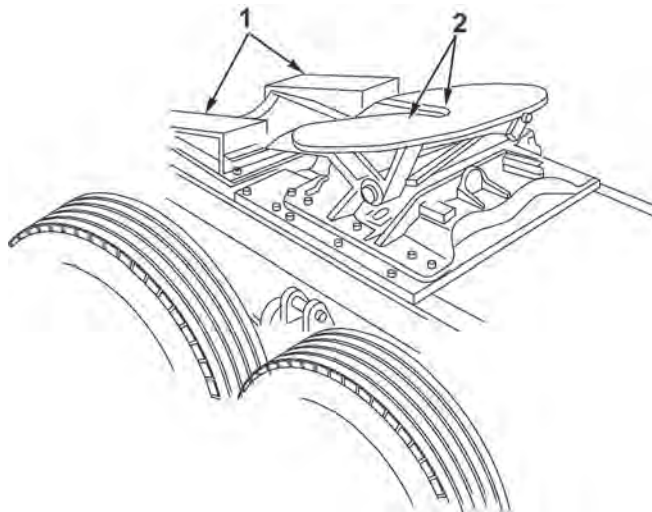


Figure 21. Uncoupling Prime Mover.

END OF TASK

SLINGING PROCEDURES**CAUTION**

DO NOT lift semitrailer with tarps, side racks, and ladder installed. This will damage tarps, side racks, stakes, and ladder. Failure to comply may result in equipment damage.

NOTE

Tarps, bows, side racks, and ladder should be stowed before lifting.

1. Remove and stow tarps, side racks, stakes, and ladder.

CAUTION

Ensure that sling hook point is facing toward outside of semitrailer. Failure to comply may result in equipment damage.

2. Connect sling hooks to four lift points (Figure 22, Item 1).

WARNING

- DO NOT place any part of your body under semitrailer while slinging operations are underway. DO NOT lift a loaded semitrailer. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
 - DO NOT lift the semitrailer without a ground guide. Use a 30 ft (9 m) guideline attached to one rear lift point. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
3. Slowly take up all slack, then lift semitrailer enough to remove ground boards.
 4. Stow ground boards and wheel chocks.
 5. After loading semitrailer, remove sling hooks from four lift points (Figure 22, Item 1).

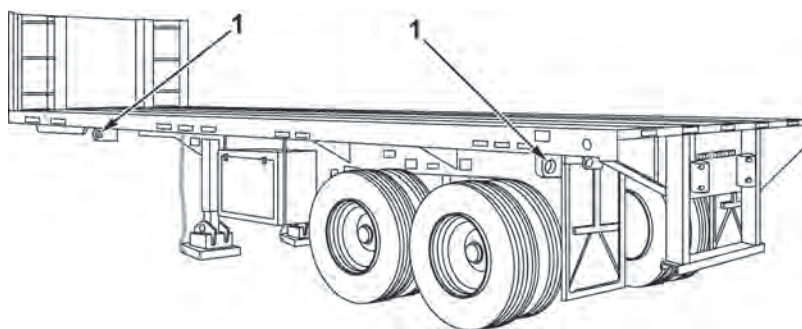


Figure 22. Lift Points.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE OPERATION UNDER UNUSUAL CONDITIONS

INITIAL SETUP:

Materials/Parts

Insulating Varnish, Electrical
(WP 0137, Table 1, Item 25)

References

FM 9-207

References (cont.)

FM 90-3
TB 43-0239
TC 21-305-20
WP 0024
WP 0085

OPERATION IN EXTREME COLD

Startup

CAUTION

Be careful when placing the semitrailer in motion after a shutdown. Congealed lubricants can cause part failure. Failure to comply may result in equipment damage.

1. Tires and ground boards may freeze to the ground or tire flat spotting may occur if tires are underinflated.
2. Brake shoes may freeze to the brake drums and must be heated to prevent damage to mating surfaces.
3. Refer to FM 9-207 and TC 21-305-20 for special instructions on driving hazards in snow and ice that may be encountered during extremely cold weather conditions.

Shutdown

1. For short periods, park in a sheltered spot out of the wind; for longer shutdown periods, if high, dry ground is not available, prepare a footing of planks or brush.
2. Remove all buildup of ice and snow as soon as possible after shutdown.
3. Cover and shield the semitrailer with canvas covers if available. Keep ends of covers off ground to keep them from freezing to the ground.
4. Drain air/moisture from air reservoirs (WP 0024).

END OF TASK

OPERATION IN EXTREME HEAT

1. Refer to TB 43-0239 and FM 90-3 for maintenance and operations, respectively, under desert conditions.
2. DO NOT park the semitrailer in sunlight for a long time. Heat and sunlight shorten tire life.
3. Park the semitrailer where it will get maximum protection from heat, sun, and dust.

END OF TASK

OPERATION IN RAINY OR HUMID CONDITIONS

Frequently inspect, clean, and lubricate inactive equipment to prevent rust and fungus accumulation.

END OF TASK**OPERATION IN SALTWATER AREAS**

Saltwater will cause rapid corrosion of metal parts. After operation, wash the semitrailer with fresh water. Clean, inspect, and lubricate equipment frequently.

END OF TASK**OPERATION IN SNOW**

Refer to TC 21-305-20 for special instructions on operation in snow.

END OF TASK**OPERATION IN MUD OR SAND****CAUTION**

DO NOT tow, pull, push, or lift semitrailer using rear bumper. Failure to comply may result in equipment damage.

1. If wheels sink into mud/sand, you may need to jack up the mired wheels and put planking or matting under them.
2. After operation in mud or sand, clean, inspect, and lubricate the semitrailer.

END OF TASK**OPERATION IN ROCKY TERRAIN**

1. Before driving over stumps or rocks, ensure that the semitrailer can clear them. Such objects can damage components on the underside of the semitrailer. Beware of low-hanging limbs that can damage cargo.
2. Ensure you have a serviceable spare tire because there is a greater chance of tire puncture.

END OF TASK

FORDING**WARNING**

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

CAUTION

- Antilock Brake System (ABS) Electronic Control Unit (ECU) must not be submerged in water. Rain, sleet, or snow will not affect operation of ECU. Failure to comply may result in equipment damage.
- Immediately after fording, apply service brakes to expel water from air brake chamber. If fording in salt water, flush chambers with fresh low-pressure water when mission allows. Failure to comply may result in equipment damage.
- DO NOT exceed fording depth of 30 in. (76.2 cm). Failure to comply may result in equipment damage.

Before Fording

1. Before entering water, check bottom surface conditions. If bottom surface is too soft, do not ford.
2. Protect cables and terminals by spraying with electrical insulating varnish.
3. ABS ECU (42 in. (106.7 cm) height) must not be submerged in water.

After Fording

1. After coming out of water, apply brakes a few times to help dry out brake linings. Ensure semitrailer brakes are working before driving at normal speeds.
2. Drain or dry all areas where water has collected if mission allows.
3. Lubricate all unpainted surfaces. See lubrication chart, WP 0085, if mission allows.
4. Lubrication fittings and hubs should not be affected by fording. Oil can points should be lubricated as specified by WP 0085 if mission allows. There is no need to tear down wheel ends or clean and repack bearings.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE

OPERATION WITH AIR BRAKE FAILURE (CAGING AIR BRAKE CHAMBERS)

INITIAL SETUP:

Tools and Special Tools

Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)

References

WP 0005

Personnel Required

(2)

GENERAL SAFETY PRECAUTIONS

WARNING



- Caging the air brake chambers is an emergency procedure. This is to be used only to move the semitrailer off the traveled portion of the road when a brake line or other part fails causing loss of air brake system air pressure. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Spring in air brake chamber is under 2,500 lbF (1,134 kgF) of force. When inspecting or caging air brake chambers, DO NOT position yourself in front of, or in line with, the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- If spring brake shows structural damage, DO NOT cage the spring and DO NOT attempt to service it. Replace the complete unit. When removing an uncaged spring brake from a vehicle, cut the service push rod making sure to relieve all pressure. After cutting the push rod, remove the spring brake from the vehicle. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Never strike any part of the spring brake with a hammer or any other heavy object. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- DO NOT drop spring brake, as compression spring may forcefully release. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

GENERAL SAFETY PRECAUTIONS - Continued**CAUTION**

DO NOT use any diaphragms with protrusions on the service side of any spring brake. Use of "piloted diaphragms" on the service side will result in a reduction of stroke length. Failure to comply may result in equipment damage.

Long stroke spring brakes are easily identified by the square air ports on the adapter (Figure 1), and the letters "LS" stamped into the spring brake.

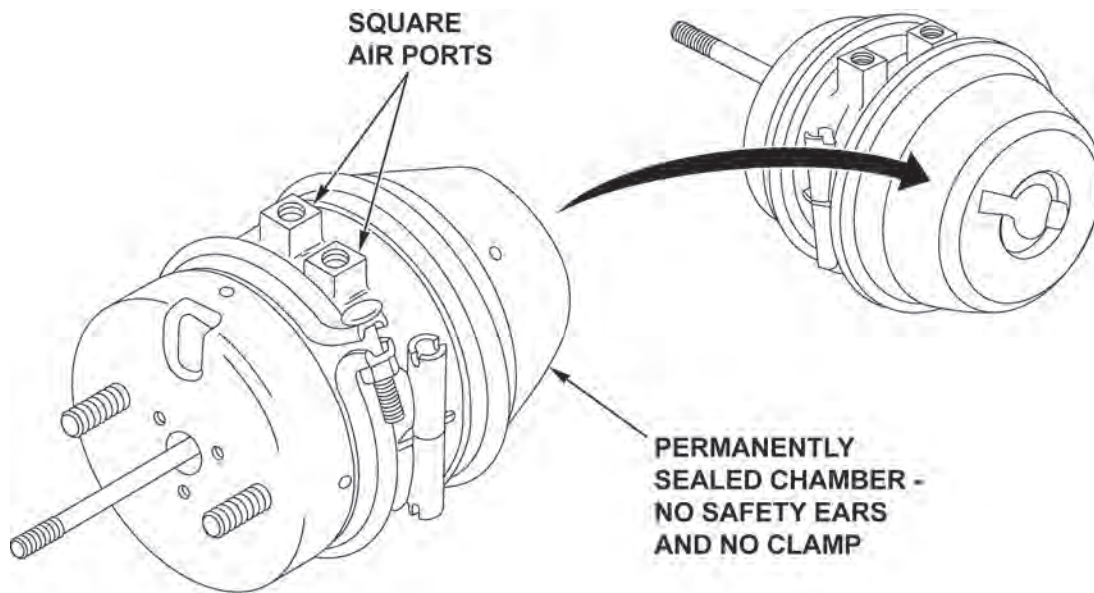


Figure 1. Long Stroke Spring Brake.

END OF TASK

MECHANICAL RELEASE OF SPRING BRAKE**WARNING**

DO NOT use prime mover air pressure or power driven impact tools to cage the air brake chamber. Excessive torque can cause damage to the spring pressure plate resulting in sudden release of the spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

There are no safety ears or clamp on a sealed-type brake.

1. Block semitrailer wheels with chock blocks to prevent movement (WP 0005).
2. Remove dust plug from release tool keyhole in center of spring chamber (Figure 2).
3. Remove release tool assembly from side pocket (Figure 2).

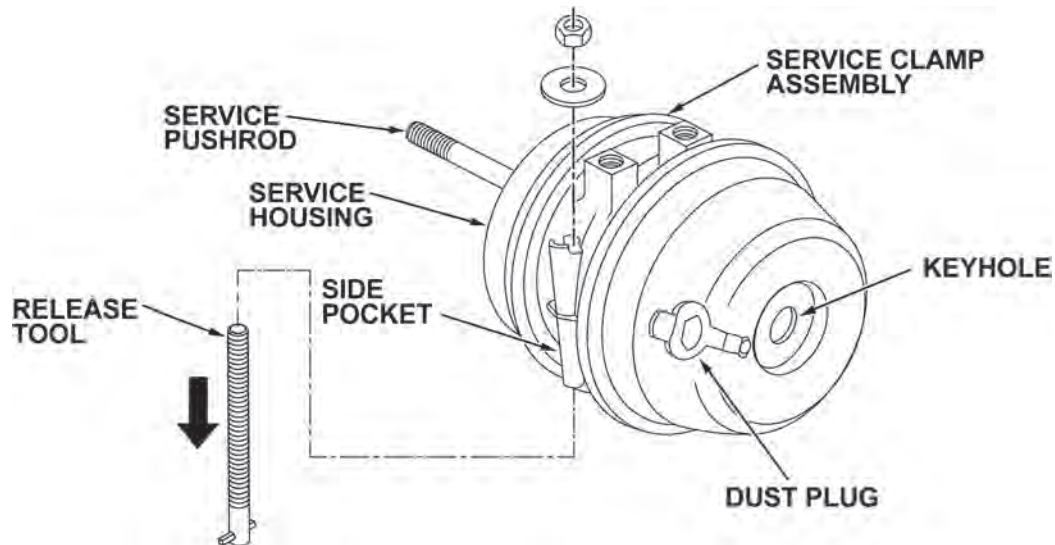


Figure 2. Sealed Brake Release.

MECHANICAL RELEASE OF SPRING BRAKE - Continued

4. Insert release tool through keyhole in chamber into pressure plate (Figure 3, Arrow A).
5. Turn release stud 1/4 turn clockwise (Figure 3, Arrow B).
6. Pull on release tool to ensure stud crosspin is properly seated in pressure plate.
7. Assemble release tool washer and nut on release stud; finger tighten only (Figure 3).

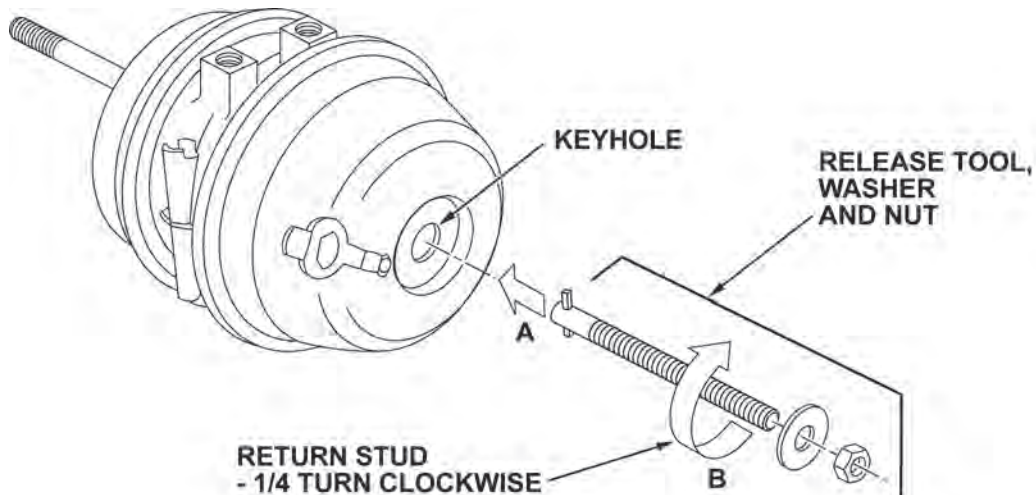


Figure 3. Sealed Brake Assembly.

WARNING

DO NOT use prime mover air pressure or power driven impact tools to cage the air brake chamber. Excessive torque can cause damage to the spring pressure plate resulting in sudden release of the spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

8. Turn release tool nut clockwise with torque wrench, and ensure pushrod is retracting (Figure 4).

CAUTION

- DO NOT overtorque release tool assembly. Overtorquing release tool can cause pressure plate damage. Torque sealed brake, S-cam type, 35 lb-ft (47 N•m) maximum, clockwise. Failure to comply may result in equipment damage.
- To ensure the compression spring is fully caged, the release tool length (X dimension) (Figure 4) should measure as shown in Table 1. Failure to comply may result in equipment damage.

NOTE

If dimension of release tool (X dimension) (Figure 4) length is less than the minimum measurement, brake unit must be replaced.

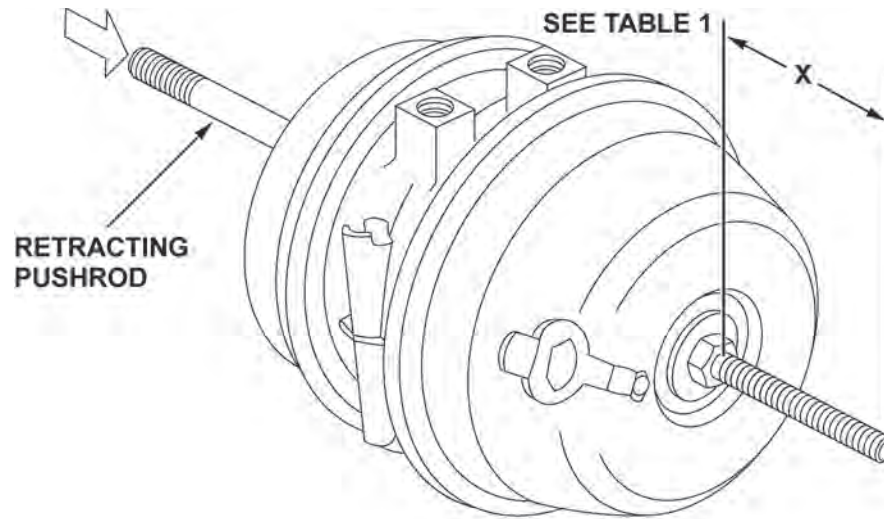


Figure 4. Pushrod Retraction.

Table 1. Release Tool Length.

MODEL	STROKE	X - MINIMUM
2430XLS	3 in.	3.463 in. (880 mm)
3030LS	3 in.	3.537 in. (898 mm)
3636	3 in.	3.602 in. (915 mm)

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

OPERATOR

TROUBLESHOOTING PROCEDURES

WORK PACKAGE INDEX

Title	WP Sequence No.
TROUBLESHOOTING INTRODUCTION AND SYMPTOM INDEX.....	WP 0008
TROUBLESHOOTING PROCEDURES - ELECTRICAL SYSTEM.....	WP 0009
TROUBLESHOOTING PROCEDURES - BRAKES.....	WP 0010
TROUBLESHOOTING PROCEDURES - LANDING LEGS.....	WP 0011
TROUBLESHOOTING PROCEDURES - TIRES AND WHEELS.....	WP 0012

OPERATOR MAINTENANCE TROUBLESHOOTING INTRODUCTION AND SYMPTOM INDEX

GENERAL

1. This Work Package (WP) provides information for identifying and correcting malfunctions that may develop while operating or maintaining the M871R Series Semitrailer.
2. The Operator Troubleshooting Symptom Index lists common malfunctions that may occur and refers you to the proper WP in WP 0009 through WP 0012 for a troubleshooting procedure.
3. If you are unsure of an item mentioned, refer to WP 0002 or the maintenance task where the item is replaced.
4. Before performing a troubleshooting procedure, read and follow all safety instructions in the Warning Summary at the front of this manual.
5. This WP cannot list all malfunctions that may occur or all tests, inspections, and corrective actions. If the appropriate symptom is not listed, notify Field Maintenance.
6. When troubleshooting a malfunction:
 - a. Locate the symptom or symptoms that best describe the malfunction.
 - b. Refer to WP 0009 through WP 0012 where the troubleshooting procedure for the malfunction in question is described. Each troubleshooting procedure is organized using the following headings: Symptom, Malfunction, and Corrective Action.
 - c. Perform each Corrective Action step in order listed until the malfunction is corrected. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

EXPLANATION OF HEADINGS

The headings in WP 0009 through WP 0012 are defined as follows:

1. **SYMPTOM.** A visual or operational indication that something is wrong with the equipment.
2. **MALFUNCTION.** Equipment defect that may cause the symptom.
3. **CORRECTIVE ACTION.** A procedure to correct the problem.

OPERATOR TROUBLESHOOTING SYMPTOM INDEX

<u>Malfunction/Symptom</u>	<u>Troubleshooting Procedure</u>
1. All Trailer Lamps/LEDs Fail to Light.....	WP 0009
2. One or More Lamps/LEDs Do Not Operate Properly.....	WP 0009
3. Dim or Flickering Lamps/LEDs.....	WP 0009
4. Brakes Will Not Release.....	WP 0010
5. Brakes Grab.....	WP 0010
6. Landing Legs Are Difficult to Raise or Lower.....	WP 0011
7. Abnormal or Uneven Tire Wear.....	WP 0012
8. Wheel Wobbles.....	WP 0012

END OF WORK PACKAGE

OPERATOR MAINTENANCE TROUBLESHOOTING PROCEDURES – ELECTRICAL SYSTEM

INITIAL SETUP:

References

WP 0023

Equipment Condition

Vehicle parked on level surface (WP 0005)

Equipment Condition (cont.)

Gladhands disconnected (WP 0005)

Wheels chocked (WP 0005)

Intervehicular cable connected to prime mover
(WP 0005)

TROUBLESHOOTING PROCEDURE

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT

WARNING



Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

SYMPTOM

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT

MALFUNCTION

PRIME MOVER LIGHTS WILL NOT OPERATE

CORRECTIVE ACTION

1. Set light panel switches in prime mover to correct positions; refer to operator manual for prime mover.
2. If prime mover lights still do not work, notify Field Maintenance.

MALFUNCTION

INTERVEHICULAR POWER CABLE NOT PROPERLY CONNECTED TO PRIME MOVER

CORRECTIVE ACTION

Pull connector out, and reset fully into receptacle.

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT - Continued**MALFUNCTION**

DIRTY, CORRODED, OR DAMAGED PINS

CORRECTIVE ACTION

1. Clean dirty or corroded pins as required (WP 0023).
2. If pins are damaged, notify Field Maintenance.

ONE OR MORE LAMPS/LEDs DO NOT OPERATE PROPERLY**SYMPTOM**

ONE OR MORE LAMPS/LEDs DO NOT OPERATE PROPERLY

MALFUNCTION

BURNED OUT OR DEFECTIVE LAMPS/LEDs

CORRECTIVE ACTION

Notify Field Maintenance.

MALFUNCTION

DIRTY OR CORRODED CONNECTORS

CORRECTIVE ACTION

Clean connectors as required (WP 0023).

MALFUNCTION

BROKEN WIRES OR LOOSE CONNECTIONS

CORRECTIVE ACTION

Notify Field Maintenance.

MALFUNCTION

DAMAGED LAMP/LED ASSEMBLY

CORRECTIVE ACTION

Notify Field Maintenance.

DIM OR FLICKERING LAMPS/LEDs**SYMPTOM**

DIM OR FLICKERING LAMPS/LEDs

MALFUNCTION

LOOSE, DIRTY, OR CORRODED LAMP/LED ELECTRICAL CONNECTOR PINS

CORRECTIVE ACTION

1. Tighten loose connectors.
2. Clean dirty or corroded pins as required (WP 0023).
3. If pins are damaged, notify Field Maintenance.

MALFUNCTION

BURNED OUT OR DEFECTIVE LAMPS/LEDs

CORRECTIVE ACTION

Notify Field Maintenance.

MALFUNCTION

DIRTY, CORRODED, OR DAMAGED INTERVEHICULAR POWER CABLE CONNECTOR PINS

CORRECTIVE ACTION

1. Clean dirty or corroded pins as required (WP 0023).
2. If pins are damaged, notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TROUBLESHOOTING PROCEDURES – BRAKES**

INITIAL SETUP:**References**

WP 0024
WP 0084

Equipment Condition (cont.)

Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)

Equipment Condition

Vehicle parked on level surface (WP 0005)

TROUBLESHOOTING PROCEDURE**BRAKES WILL NOT RELEASE****SYMPTOM**

BRAKES WILL NOT RELEASE

MALFUNCTION

SHUT-OFF VALVES CLOSED AT PRIME MOVER

CORRECTIVE ACTION

Ensure shut-off valves are fully opened; refer to operator manual for prime mover.

MALFUNCTION

PRESSURE GAUGE IN PRIME MOVER BELOW 90 PSI (621 kPa)

CORRECTIVE ACTION

1. Build up air pressure to normal level.
2. If pressure is low and/or will not build up, notify Field Maintenance.

MALFUNCTION

AIR LINES ARE NOT PROPERLY CONNECTED AT GLADHANDS

CORRECTIVE ACTION

Ensure air lines are properly
connected (Emergency (red) to Emergency (red) and Service (blue) to Service (blue)).

BRAKES WILL NOT RELEASE - Continued**MALFUNCTION**

DIRTY OR DAMAGED PACKING IN GLADHANDS

CORRECTIVE ACTION

1. Ensure packing is cleaned and not damaged. If damaged, notify Field Maintenance.
2. If packing is dirty, clean packing (WP 0084).
3. If seal is leaking or missing, notify Field Maintenance.

MALFUNCTION

AIR LINE CONNECTIONS LEAK

CORRECTIVE ACTION

Notify Field Maintenance.

MALFUNCTION

DRAIN VALVE ON EACH RESERVOIR LEAKING

CORRECTIVE ACTION

1. Ensure drain valve on each reservoir is closed (WP 0024).
2. If drain valve still leaks, notify Field Maintenance.

BRAKES GRAB**SYMPTOM**

BRAKES GRAB

MALFUNCTION

MOISTURE IN AIR RESERVOIR

CORRECTIVE ACTION**WARNING**

Wear eye protection when opening air reservoir drain valve, and avoid contact with the air stream. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1. Open each drain valve to see if moisture is present (WP 0024).
2. If reservoir is dry and above symptom still exists, notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TROUBLESHOOTING PROCEDURES – LANDING LEGS**

INITIAL SETUP:**References**

WP 0028

Equipment Condition (cont.)

Gladhands disconnected (WP 0005)

Wheels chocked (WP 0005)

Equipment Condition

Vehicle parked on level surface (WP 0005)

TROUBLESHOOTING PROCEDURE**LANDING LEGS ARE DIFFICULT TO RAISE OR LOWER****SYMPTOM**

LANDING LEGS ARE DIFFICULT TO RAISE OR LOWER

MALFUNCTION

DAMAGED OR BROKEN CRANK HANDLE

CORRECTIVE ACTION

If crank handle is damaged or broken, notify Field Maintenance.

MALFUNCTION

DIRT ON LOWER LANDING LEG

CORRECTIVE ACTION

Clean lower landing leg (WP 0028).

MALFUNCTION

DAMAGED OR BENT LANDING LEGS

CORRECTIVE ACTION

Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TROUBLESHOOTING PROCEDURES – TIRES AND WHEELS**

INITIAL SETUP:**References**

WP 0002

Equipment Condition (cont.)

Gladhands disconnected (WP 0005)

Wheels chocked (WP 0005)

Equipment Condition

Vehicle parked on level surface (WP 0005)

TROUBLESHOOTING PROCEDURE**ABNORMAL OR UNEVEN TIRE WEAR****SYMPTOM**

ABNORMAL OR UNEVEN TIRE WEAR

MALFUNCTION

INCORRECT TIRE PRESSURE

CORRECTIVE ACTION

Ensure tire pressure is set to 115 psi (793 kPa) (WP 0002).

MALFUNCTION

SPRINGS OF SUSPENSION SYSTEM DAMAGED AND LOOSE OR MISSING BOLTS AND NUTS

CORRECTIVE ACTION

Notify Field Maintenance.

MALFUNCTION

TRACKING OF WHEELS/AXLES POSSIBLY MISALIGNED

CORRECTIVE ACTION

Notify Field Maintenance.

WHEEL WOBBLES**SYMPTOM**

WHEEL WOBBLES

MALFUNCTION

MISSING OR LOOSE STUD NUTS OR LUG NUTS

CORRECTIVE ACTION

1. Replace or tighten nuts.
2. Notify Field Maintenance to apply proper torque.

MALFUNCTION

CRACKED OR BROKEN WHEELS

CORRECTIVE ACTION

Notify Field Maintenance if the wheels are cracked or broken.

END OF WORK PACKAGE

CHAPTER 4

FIELD

TROUBLESHOOTING PROCEDURES

WORK PACKAGE INDEX

Title	WP Sequence No.
TROUBLESHOOTING INTRODUCTION AND SYMPTOM INDEX.....	WP 0013
TROUBLESHOOTING PROCEDURES - ELECTRICAL SYSTEM.....	WP 0014
TROUBLESHOOTING PROCEDURES - BRAKES.....	WP 0015
TROUBLESHOOTING PROCEDURES - ANTILOCK BRAKE SYSTEM (ABS).....	WP 0016
TROUBLESHOOTING PROCEDURES - LANDING LEGS.....	WP 0017
TROUBLESHOOTING PROCEDURES - SPRINGS AND SUSPENSION.....	WP 0018

FIELD MAINTENANCE TROUBLESHOOTING INTRODUCTION AND SYMPTOM INDEX

GENERAL

1. This Work Package (WP) provides information for identifying and correcting malfunctions that may develop while operating or maintaining the M871R Series Semitrailer.
2. The Field Troubleshooting Symptom Index lists common symptoms that may occur and refers you to the proper WP for a troubleshooting procedure.
3. If you are unsure of an item mentioned, refer to WP 0002 or the maintenance task where the item is replaced.
4. Before performing a troubleshooting procedure, read and follow all safety instructions in the Warning Summary at the front of this manual.
5. This WP cannot list all malfunctions that may occur or all tests, inspections, and corrective actions. If the appropriate symptom is not listed, notify supervisor.
6. When troubleshooting a malfunction:
 - a. Locate the symptom or symptoms below that best describes the malfunction.
 - b. Refer to WP 0014 through WP 0018 where the troubleshooting procedure for the malfunction in question is described. Each troubleshooting procedure is organized using the following headings: "Symptom," "Malfunction," and "Corrective Action."
 - c. Perform each Corrective Action step in order listed until the malfunction is corrected. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

EXPLANATION OF HEADINGS

The headings in WP 0014 through WP 0018 are defined as follows:

1. **SYMPTOM.** A visual or operational indication that something is wrong with the equipment.
2. **MALFUNCTION.** Equipment defect that may cause the symptom.
3. **CORRECTIVE ACTION.** A procedure to correct the problem.

FIELD TROUBLESHOOTING SYMPTOM INDEX

<u>Malfunction/Symptom</u>	<u>Troubleshooting Procedure</u>
9. All Trailer Lamps/LEDs Fail to Light.....	WP 0014
10. One or More Lamps/LEDs Do Not Operate Properly.....	WP 0014
11. Brakes Will Not Release.....	WP 0015
12. No Brakes or Weak Brakes.....	WP 0015
13. Slow Brake Application or Release.....	WP 0015
14. Brakes Grab.....	WP 0015
15. Brakes Overheat While Driving.....	WP 0015
16. ABS Indicator Light is On (24 Volt Prime Mover).....	WP 0016
17. ABS Indicator Light is On (12 Volt Prime Mover).....	WP 0016
18. Difficulty in Turning Hand Crank.....	WP 0017
19. Semitrailer Pulls to One Side.....	WP 0018
20. Improper Spring Action.....	WP 0018
21. Excessively Worn, Scuffed, or Cupped Tires.....	WP 0018
22. Improper Vehicle Tracking.....	WP 0018

END OF WORK PACKAGE

FIELD MAINTENANCE TROUBLESHOOTING PROCEDURES – ELECTRICAL SYSTEM

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Multimeter (WP 0138, Table 1, Item 14)

References (cont.)

WP 0035
WP 0036

References

WP 0023
WP 0030
WP 0031
WP 0032

Equipment Condition

Vehicle parked on level surface (WP 0005)
Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)
Nose plate removed (M871A2R) (WP 0034)

TROUBLESHOOTING PROCEDURE

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT

SYMPTOM

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT

MALFUNCTION

TRIPPED CIRCUIT BREAKERS OR BLOWN FUSES

CORRECTIVE ACTION

WARNING



Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

1. Reset opened circuit breaker; refer to maintenance manual for prime mover.
2. Replace blown fuse; refer to maintenance manual for prime mover.

MALFUNCTION

WIRING HARNESS HAS BARE SPOTS IN INSULATION

CORRECTIVE ACTION

Repair chassis wiring harness as necessary (WP 0035).

ALL TRAILER LAMPS/LEDs FAIL TO LIGHT - Continued**MALFUNCTION**

LOOSE OR BROKEN GROUND WIRES AT NOSE PLATE (M871A2R)

CORRECTIVE ACTION

Repair ground wire or tighten wire connection if loose (WP 0034).

ONE OR MORE LAMPS/LEDs DO NOT OPERATE PROPERLY**SYMPTOM**

ONE OR MORE LAMPS/LEDs DO NOT OPERATE PROPERLY

MALFUNCTION

DEFECTIVE LAMP BULBS/LEDs

CORRECTIVE ACTION

Replace defective lamp bulbs/LEDs (WP 0032).

MALFUNCTION

LOOSE, DIRTY, OR CORRODED CONNECTS

CORRECTIVE ACTION

Clean terminal assemblies and electrical contacts (WP 0023).

MALFUNCTION

DAMAGED LAMPS/LEDs ASSEMBLY

CORRECTIVE ACTION

Replace lamps/LED assembly if damaged (WP 0030, WP 0031, WP 0032).

MALFUNCTION

WIRE IN CABLE BROKEN OR SHORTED, OR CONNECTION IN PLUG/RECEPTACLE LOOSE

CORRECTIVE ACTION

Tighten loose connections. Repair or replace as necessary (WP 0036).

END OF WORK PACKAGE

FIELD MAINTENANCE TROUBLESHOOTING PROCEDURES – BRAKES

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Detergent (WP 0137, Table 1, Item 18)

Personnel Required

(2)

References

WP 0038
WP 0039

References (cont.)

WP 0040
WP 0041
WP 0043
WP 0044
WP 0045
WP 0050

Equipment Condition

Vehicle parked on level surface (WP 0005)
Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)

TROUBLESHOOTING PROCEDURE**BRAKES WILL NOT RELEASE****SYMPTOM**

BRAKES WILL NOT RELEASE

MALFUNCTION

IMPROPER POSITION OF BRAKE VALVE ON PRIME MOVER

CORRECTIVE ACTION

Move brake valve to release position; refer to operator manual for prime mover.

MALFUNCTION

IMPROPER AIR HOSES CONNECTION TO PRIME MOVER

CORRECTIVE ACTION

Reconnect gladhands if air hoses are not properly
connected (Emergency (red) to Emergency (red), Service (blue) to Service (blue)).

BRAKES WILL NOT RELEASE - Continued**MALFUNCTION**

IMPROPER POSITION OF SHUT-OFF VALVES AT PRIME MOVER

CORRECTIVE ACTION

1. If prime mover is not equipped with shut-off valves, go to next malfunction.
2. If air line valves are shut off, open them fully.

MALFUNCTION

AIR PRESSURE GAUGE ON PRIME MOVER BELOW 90 PSI (621 kPa)

CORRECTIVE ACTION

1. Build up pressure to normal level.
2. If air pressure is low and will not build up, troubleshoot prime mover air system; refer to maintenance manual for prime mover.

MALFUNCTION

DEFECTIVE ELECTRONIC CONTROL UNIT (ECU) VALVES

CORRECTIVE ACTION

1. Test ECU valves (WP 0041).
2. If ECU valve is defective, replace (WP 0041).

MALFUNCTION

RESTRICTION IN SERVICE AIR AND EMERGENCY AIR LINES

CORRECTIVE ACTION

If air lines or hoses are restricted, replace or repair as required (WP 0043).

BRAKES WILL NOT RELEASE - Continued**MALFUNCTION**

AIR BRAKE CHAMBER LEAKS AT CLAMP BANDS AND HOSE FITTINGS

CORRECTIVE ACTION**WARNING**

- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of or in line with the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
1. Apply soapy water at clamp bands and hose fittings.
 2. If air brake chamber clamp band leaks, replace air brake chamber (WP 0044).
 3. If hose fitting leaks, tighten hose fitting or replace hose (WP 0043).

MALFUNCTION

BROKEN BRAKE SHOE TENSION SPRINGS

CORRECTIVE ACTION

1. Remove brake drum to inspect the brake shoe tension (WP 0050).
2. If brake shoe tension spring is broken, replace (WP 0039).

NO BRAKES OR WEAK BRAKES**SYMPTOM**

NO BRAKES OR WEAK BRAKES

MALFUNCTION

IMPROPER AIR HOSES CONNECTION TO PRIME MOVER

CORRECTIVE ACTION

Reconnect gladhands if air hoses are not properly connected (Emergency (red) to Emergency (red), Service (blue) to Service (blue)).

MALFUNCTION

POSITION OF SHUT-OFF VALVES AT PRIME MOVER

CORRECTIVE ACTION

1. If prime mover is not equipped with shut-off valves, go to next malfunction.
2. If air line valves are shut off, open them fully.

MALFUNCTION

DRAIN VALVE ON EACH RESERVOIR LEAKING

CORRECTIVE ACTION

1. Ensure drain valve on each reservoir is closed.
2. If drain valve still leaks, replace (WP 0045).

MALFUNCTION

AIR PRESSURE GAUGE ON PRIME MOVER BELOW 90 PSI (621 kPa)

CORRECTIVE ACTION

1. Build up pressure to normal level.
2. If air pressure is low and will not build up, troubleshoot prime mover air system; refer to maintenance manual for prime mover.

MALFUNCTION

AIR LINES AND CONNECTORS RESTRICTED OR LEAK

CORRECTIVE ACTION

Remove any restrictions from hoses and tighten connections. Repair or replace as necessary (WP 0043).

NO BRAKES OR WEAK BRAKES - Continued**MALFUNCTION****DEFECTIVE ECU VALVES****CORRECTIVE ACTION**

1. Test ECU valves (WP 0041).
2. If ECU valve is defective, replace (WP 0041).

MALFUNCTION**AIR BRAKE CHAMBER LEAKS AT CLAMP BANDS AND HOSE FITTINGS****CORRECTIVE ACTION****WARNING**

- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of or in line with the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
1. Have a helper apply and hold the prime mover service brakes.
 2. If air brake chamber clamp band leaks, replace air brake chamber (WP 0044).
 3. If hose fitting leaks, tighten hose fitting or replace hose (WP 0043).

NO BRAKES OR WEAK BRAKES - Continued**MALFUNCTION**

BRAKES NOT PROPERLY ADJUSTED

CORRECTIVE ACTION

1. Check operation of automatic slack adjusters (WP 0040).
2. If slack adjuster is defective, replace (WP 0040).

MALFUNCTION

WORN-OUT BRAKE LINING

CORRECTIVE ACTION

1. Remove brake drum to inspect brake lining (WP 0050).
2. If brake lining is worn, replace brake shoe (WP 0039).

MALFUNCTION

GREASE ON BRAKE LINING

CORRECTIVE ACTION

1. If camshaft O-ring leaks, replace O-ring (WP 0038) and brake shoes (WP 0039).
2. If wheel hub seal leaks, replace seal (WP 0050) and brake shoes (WP 0039).

MALFUNCTION

BROKEN OR FROZEN CAMSHAFT ROLLER

CORRECTIVE ACTION

If camshaft roller is broken or frozen, replace (WP 0038).

SLOW BRAKE APPLICATION OR RELEASE**SYMPTOM**

SLOW BRAKE APPLICATION OR RELEASE

MALFUNCTION

AIR PRESSURE GAUGE ON PRIME MOVER BELOW 90 PSI (621 kPa)

CORRECTIVE ACTION

1. Build up pressure to normal level.
2. If air pressure is low and will not build up, troubleshoot prime mover air system; refer to maintenance manual for prime mover.

MALFUNCTION

AIR LINES AND CONNECTORS RESTRICTED OR LEAK

CORRECTIVE ACTION

Remove any restrictions from hoses and tighten connections. Repair or replace as necessary (WP 0043).

MALFUNCTION

DEFECTIVE ECU VALVES

CORRECTIVE ACTION

1. Test ECU valves (WP 0041).
2. If ECU valve is defective, replace (WP 0041).

SLOW BRAKE APPLICATION OR RELEASE - Continued**MALFUNCTION**

AIR BRAKE CHAMBER LEAKS AT CLAMP BANDS AND HOSE FITTINGS

CORRECTIVE ACTION**WARNING**

- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of or in line with the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
1. Apply soapy water at clamp bands and hose fittings.
 2. If air brake chamber clamp band leaks, replace air brake chamber (WP 0044).
 3. If hose fitting leaks, tighten hose fitting or replace hose (WP 0043).

MALFUNCTION

BROKEN BRAKE SHOE TENSION SPRINGS

CORRECTIVE ACTION

1. Remove brake drum to inspect brake shoe tension (WP 0050).
2. If brake shoe tension spring is broken, replace (WP 0039).

MALFUNCTION

BROKEN OR FROZEN CAMSHAFT ROLLER

CORRECTIVE ACTION

If camshaft roller is broken or frozen, replace (WP 0038).

BRAKES GRAB**SYMPTOM**

BRAKES GRAB

MALFUNCTION

MOISTURE IN AIR RESERVOIRS

CORRECTIVE ACTION**WARNING**

Wear eye protection when opening air reservoir drain valve, and avoid contact with the air stream. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

Open drain valves and allow moisture to drain.

MALFUNCTION

BRAKES NOT PROPERLY ADJUSTED

CORRECTIVE ACTION

1. Check operation of automatic slack adjusters (WP 0040).
2. If slack adjuster is defective, replace (WP 0040).

MALFUNCTION

LOOSE OR WORN WHEEL BEARINGS

CORRECTIVE ACTION

1. If wheel bearings are loose, adjust (WP 0050).
2. If wheel bearings cannot be adjusted, replace (WP 0050).

MALFUNCTION

GREASE ON BRAKE LINING

CORRECTIVE ACTION

1. If camshaft O-ring leaks, replace O-ring (WP 0038) and brake shoes (WP 0039).
2. If wheel hub seal leaks, replace seal (WP 0050) and brake shoes (WP 0039).

BRAKES GRAB - Continued**MALFUNCTION**

BROKEN OR FROZEN CAMSHAFT ROLLER

CORRECTIVE ACTION

1. If camshaft roller is broken or frozen, replace (WP 0038).
2. If camshaft is defective, replace (WP 0038).

MALFUNCTION

WORN-OUT BRAKE LINING

CORRECTIVE ACTION

If brake lining is worn, replace brake shoe (WP 0039).

MALFUNCTION

CRACKED, SCORED, OR DEFORMED BRAKE DRUM

CORRECTIVE ACTION

If brake drum is cracked, scored, or deformed, replace (WP 0050).

BRAKES OVERHEAT WHILE DRIVING**SYMPTOM**

BRAKES OVERHEAT WHILE DRIVING

MALFUNCTION

BRAKES NOT PROPERLY ADJUSTED

CORRECTIVE ACTION

1. Check operation of automatic slack adjusters (WP 0040).
2. If slack adjuster is defective, replace (WP 0040).

MALFUNCTION

BROKEN BRAKE SHOE TENSION SPRINGS

CORRECTIVE ACTION

If brake drum is cracked, scored, or deformed, replace (WP 0050).

BRAKES OVERHEAT WHILE DRIVING - Continued**MALFUNCTION**

BROKEN OR FROZEN CAMSHAFT ROLLER

CORRECTIVE ACTION

1. If camshaft roller is broken or frozen, replace (WP 0038).
2. If camshaft is defective, replace (WP 0038).

MALFUNCTION

CRACKED, SCORED, OR DEFORMED BRAKE DRUM

CORRECTIVE ACTION

If brake drum is cracked, scored, or deformed, replace (WP 0050).

END OF WORK PACKAGE

FIELD MAINTENANCE
TROUBLESHOOTING PROCEDURES – ANTILOCK BRAKE SYSTEM (ABS)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Multimeter (WP 0138, Table 1, Item 14)

Equipment Condition (cont.)

Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)

Personnel Required

(2)

References

WP 0033
WP 0034

Equipment Condition

Vehicle parked on level surface (WP 0005)

WARNING

- Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

Power Line Carrier (PLC) signal is transmitted on the blue wire of the standard 12-volt harness system.

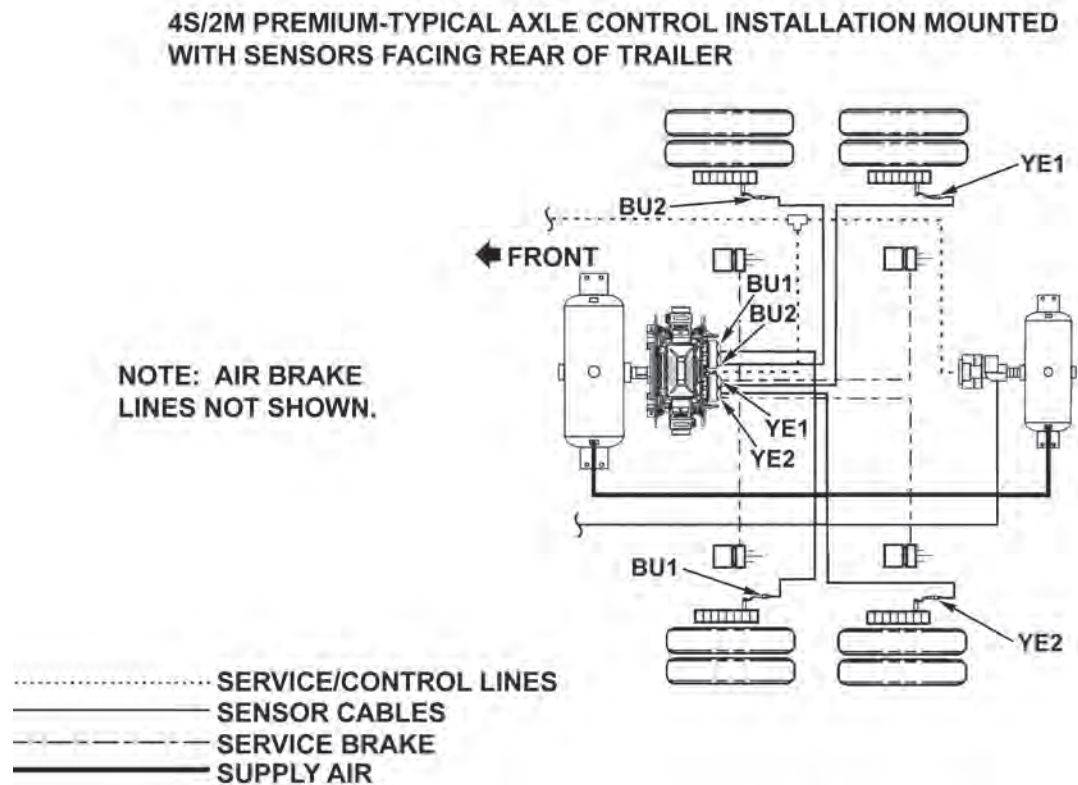
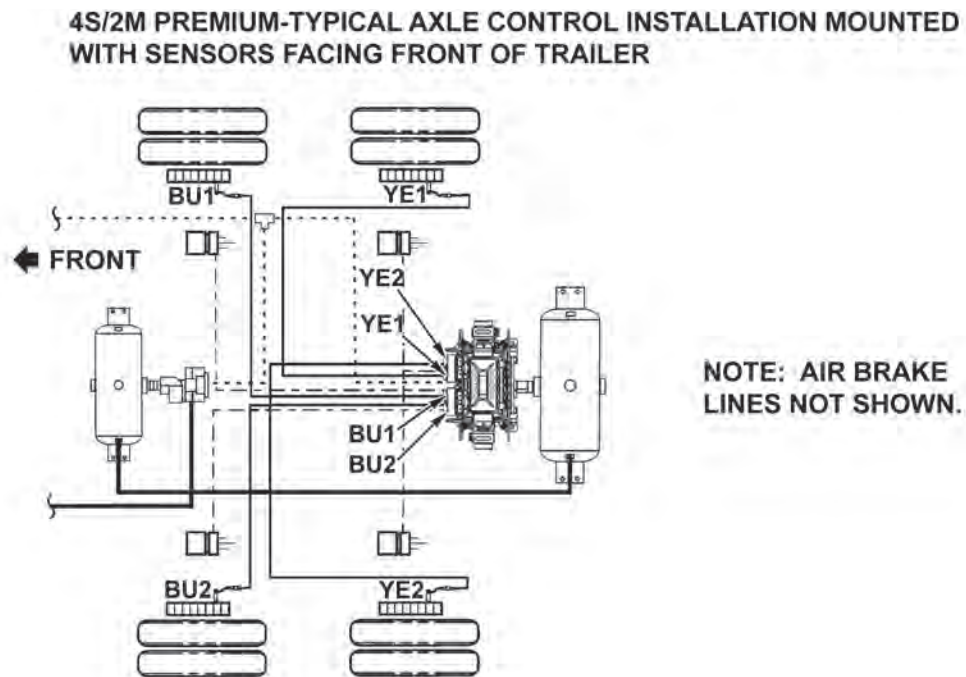


Figure 1. System Configurations.

PLC WIRING SCHEMATIC

GENERIC INPUT/OUTPUT (EXPANDED CAPABILITY)

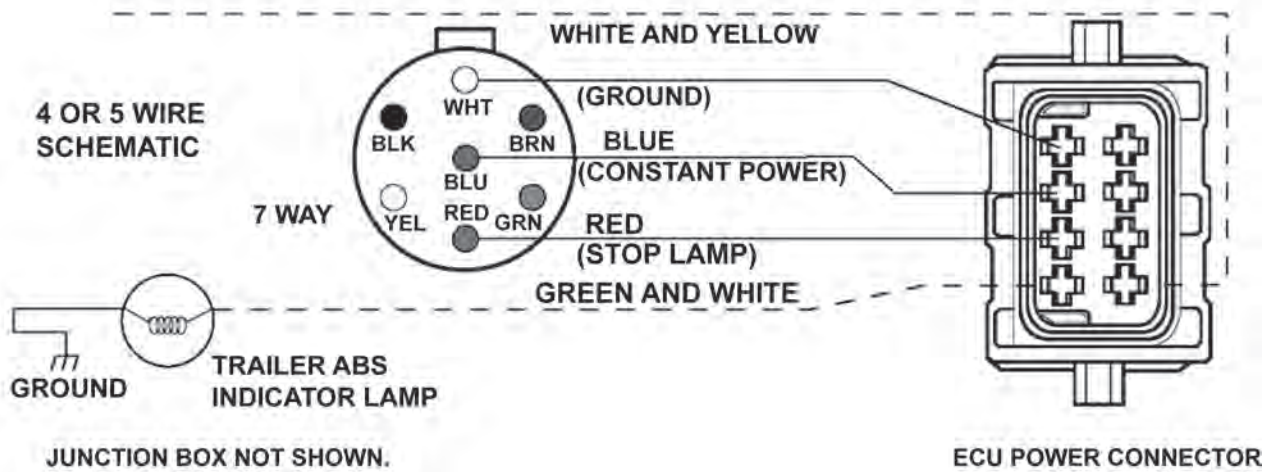


Figure 2. Power Cable Wiring Diagrams.

IGNITION POWER ACTIVATION

Ignition power activation is process of using vehicle's ignition switch (or interrupting the power on blue wire by some other means) to display blink codes on trailer ABS indicator lamp located on side of the trailer. This method is for constant power vehicles only.

NOTE

For ignition power activation, power is provided by ignition switch.

1. Turn ignition switch on for no longer than 5 seconds. ABS indicator lamp will be on.
2. Turn ignition switch off. ABS indicator lamp will go out.
3. Turn ignition switch on. ABS indicator lamp will then come on, then go out.
4. Blink code will be displayed three times by ABS indicator lamp on trailer.

Table 1. Blink Codes.

BLINK CODE	PROBLEM AREA	ACTION
3	Sensor BU1	Determine sensor location.
		Check sensor installation.
		Make necessary repairs.

IGNITION POWER ACTIVATION - Continued

Table 1. Blink Codes - Continued.

BLINK CODE	PROBLEM AREA	ACTION
4	Sensor YE1	Determine sensor location.
		Check sensor installation.
		Make necessary repairs.
5	Sensor BU2	Determine sensor location.
		Check sensor installation.
		Make necessary repairs.
6	Sensor YE2	Determine sensor location.
		Check sensor installation.
		Make necessary repairs.
7	External ABS modulator valve	Verify proper electrical installation.
		Check power supply.
		Make necessary corrections.
9	Internal modulator failure, inlet valve #2	Verify proper installation.
10	Internal modulator failure, inlet valve #1	Verify proper installation.
11	Internal modulator failure, outlet valve	Verify proper installation.
14	Power supply	Verify proper electrical installation.
		Check power supply.
		Make necessary corrections.
15	Electronic Control Unit (ECU) failure	Verify proper installation.
16	SAE J1708 failure	Internal failure, contact J1708 manufacturer.
17	SAE J2497 (PLC) failure	Internal failure, contact J2497 manufacturer.
18	Generic Input/Output (I/O) failure	Verify proper electrical installation.
		Check power supply.
		Make necessary corrections.

TROUBLESHOOTING PROCEDURE**ABS INDICATOR LIGHT IS ON (24 VOLT PRIME MOVER)****SYMPTOM**

ABS INDICATOR LIGHT IS ON (24 VOLT PRIME MOVER)

MALFUNCTION

ABS FAULT WITH 24 VOLT PRIME MOVER

CORRECTIVE ACTION**NOTE**

DO NOT remove UTM-2412 from the semitrailer for these tests unless instructed.

1. Check converter regulation by measuring voltage across pin 7 (12 volt converter output for ABS) and pin 1 (ground) of ECU. Reading from pin 7 to pin 1 of ECU should be about 12 volts. If 12 volts are measured, converter is working properly. Go to Step 2.
2. Check voltage from pin 1 to trailer chassis ground (not converter box itself). If voltage is greater than 1 volt, remove UTM-2412, clean ground straps, and chassis connection points. Reassemble and retest.
3. If no voltage or low voltage is measured across pins 1 and 7 of ECU, check for the following:
 - a. 24 volt supply from prime mover on pin K of main wiring harness inline connector to ABS main harness.
 - b. Shorted trailer harness ABS power circuit.
4. If there is good 24 volt supply into converter and ABS power circuit is not shorted, replace converter box (WP 0033 or WP 0034).
5. If 24 volt is measured across pins 1 and 7 of ECU, check converter to trailer chassis ground described in Step 2.
6. If ground is good and 24 volt is still present on ABS power, replace converter box (WP 0033 or WP 0034).

ABS INDICATOR LIGHT IS ON (12 VOLT PRIME MOVER)**SYMPTOM**

ABS INDICATOR LIGHT IS ON (12 VOLT PRIME MOVER)

MALFUNCTION

ABS FAULT WITH 12 VOLT PRIME MOVER

CORRECTIVE ACTION**NOTE**

DO NOT remove the UTM-2412 from the semitrailer for these tests unless instructed.

1. This is pass-through in UTM-2412 for ECU ABS power. ABS controller will see voltage from 12 volt prime mover as applied to pin 7 of ECU. Confirm UTM-2412 continuity by measuring from pin 7 to pin K of 24-pin connector on trailer harness side.
2. If there is no continuity, check for corrosion on connector terminals. Clean terminals.
3. If ground is good and 24 volt is still present on ABS power, replace converter box (WP 0033 or WP 0034).

END OF WORK PACKAGE

**FIELD MAINTENANCE
TROUBLESHOOTING PROCEDURES – LANDING LEGS**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)

References

WP 0061

Equipment Condition

Vehicle parked on level surface (WP 0005)

TROUBLESHOOTING PROCEDURE**DIFFICULTY IN TURNING HAND CRANK****SYMPTOM**

DIFFICULTY IN TURNING HAND CRANK

MALFUNCTION

BENT LOWER LEG

CORRECTIVE ACTION

If lower leg is bent, replace (WP 0061).

MALFUNCTION

LANDING GEAR BOX NOISY

CORRECTIVE ACTION

1. Operate hand crank and listen for grinding gears or bearings in the gear box.
2. If gears or bearings grind and legs do not extend or retract properly, replace landing gear box with assembled gear box (WP 0061).

END OF WORK PACKAGE

FIELD MAINTENANCE
TROUBLESHOOTING PROCEDURES – SPRINGS AND SUSPENSION

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

References (cont.)

WP 0037
WP 0050
WP 0064
WP 0065

References

TM 9-2610-200-14
WP 0002
WP 0015
WP 0026

Equipment Condition

Vehicle parked on level surface (WP 0005)
Semitrailer properly connected to prime mover
(WP 0005)
Wheels chocked (WP 0005)

TROUBLESHOOTING PROCEDURE**SEMITRAILER PULLS TO ONE SIDE****SYMPTOM**

SEMITRAILER PULLS TO ONE SIDE

MALFUNCTION

BRAKES DRAG

CORRECTIVE ACTION

If brakes are dragging, go to Brakes Overheat While Driving (WP 0015).

MALFUNCTION

LOOSE OR WORN WHEEL BEARINGS

CORRECTIVE ACTION

1. If wheel bearings are loose, adjust (WP 0050).
2. If wheel bearings cannot be adjusted, replace (WP 0050).

SEMITRAILER PULLS TO ONE SIDE - Continued**MALFUNCTION**

LOOSE TRUNNION TUBE HANGER BOLTS

CORRECTIVE ACTION

If trunnion tube hanger U-bolts are loose, torque to 880 lb-ft (1193 N•m) dry (WP 0064 or WP 0065).

MALFUNCTION

LOOSE OR BROKEN SPRINGS

CORRECTIVE ACTION

If springs are loose or broken, repair as required (WP 0064 or WP 0065).

IMPROPER SPRING ACTION**SYMPTOM**

IMPROPER SPRING ACTION

MALFUNCTION

LOOSE SPRING END CAP U-BOLTS

CORRECTIVE ACTION

If U-bolts are loose, torque U-bolt lock nuts to 300 lb-ft (407 N•m) dry.

MALFUNCTION

SPRINGS BROKEN OR WEAK SPRING LEAVES

CORRECTIVE ACTION

If leaves are broken or weak, replace (WP 0064 or WP 0065).

EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRES**SYMPTOM**

EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRES

MALFUNCTION

INCORRECT TIRE PRESSURE

CORRECTIVE ACTION

Correct tire pressure to 115 psi (793 kpa) (WP 0002).

EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRES - Continued**MALFUNCTION**

LOOSE WHEELS

CORRECTIVE ACTION

If wheels are loose, tighten wheel lug nuts (WP 0026).

MALFUNCTION

BENT WHEEL

CORRECTIVE ACTION

Replace wheel if bent (WP 0026).

MALFUNCTION

IMPROPER TIRE MATCHING

CORRECTIVE ACTION**NOTE**

Radial and bias tires cannot be mixed on semitrailer.

If tires do not match, remove and match tires (TM 9-2610-200-14).

MALFUNCTION

LOOSE OR WORN WHEEL BEARINGS

CORRECTIVE ACTION

1. If wheel bearings are loose, adjust (WP 0050).
2. If wheel bearings cannot be adjusted, replace (WP 0050).

MALFUNCTION

CRACKED, SCORED, OR DEFORMED BRAKE DRUM

CORRECTIVE ACTION

If brake drum is cracked, scored, or deformed, replace (WP 0015).

IMPROPER VEHICLE TRACKING**SYMPTOM**

IMPROPER VEHICLE TRACKING

MALFUNCTION

AXLE DAMAGED

CORRECTIVE ACTION

Replace damaged axle (WP 0037).

MALFUNCTION

AXLE MISALIGNED

CORRECTIVE ACTION

If axles are misaligned, align axles (WP 0037).

MALFUNCTION

LOOSE SPRINGS

CORRECTIVE ACTION

Tighten loose springs (WP 0064 or WP 0065).

MALFUNCTION

TRUNNION TUBE MOUNTING LOOSE OR DAMAGED

CORRECTIVE ACTION

1. If trunnion tube is loose, tighten (WP 0064 or WP 0065).
2. If trunnion tube is damaged, replace (WP 0064 or WP 0065).

END OF WORK PACKAGE

CHAPTER 5

**OPERATOR PREVENTIVE MAINTENANCE CHECKS
AND SERVICES (PMCS) INSTRUCTIONS**

WORK PACKAGE INDEX

Title	WP Sequence No.
OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION.....	WP 0019
OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS).....	WP 0020

OPERATOR MAINTENANCE

OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION

GENERAL

Preventive Maintenance Checks and Services (PMCS) means systematic caring, inspecting, and servicing of equipment to keep it in good condition and to prevent breakdowns. As the semitrailer's operator, your mission is to:

1. Ensure to perform your PMCS each time you operate the semitrailer. Always do your PMCS in the same order, so it gets to be a habit. Once you have had some practice, you will quickly spot anything wrong.
2. Do your BEFORE PMCS just before you operate the semitrailer. Pay attention to Warnings, Cautions, and Notes.
3. Do your DURING PMCS while you operate the semitrailer. DURING operation means to monitor the semitrailer and its related components while it is actually being operated. Pay attention to Warnings, Cautions, and Notes.
4. Do your AFTER PMCS right after operating the semitrailer. Pay attention to Warnings, Cautions, and Notes.
5. Use DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E to record any faults that you discover before, during, or after operation, unless you can fix them. You DO NOT need to record faults that you fix.
6. Be prepared to assist Field Maintenance when they lubricate the semitrailer. Perform any other services when required by Field Maintenance.

PMCS PROCEDURES

1. Operator PMCS Work Package (WP) lists inspections and care required to keep your semitrailer in good operating condition. It is set up so you can make your BEFORE operation checks as you walk around the semitrailer.
2. The ITEM NO. column provides a logical sequence for PMCS to be performed and is used as a source of item number for the TM ITEM NO. column when recording PMCS results on DA Form 2404 or DA Form 5988-E.
3. The INTERVAL column tells you when to do a certain check or service.
4. The ITEM TO BE CHECKED OR SERVICED column lists the item to check or service.
5. The PROCEDURE column tells you how to do the required check or service. Carefully follow these instructions. When instructed to do so, notify Field Maintenance.

NOTE

The terms "ready/available" and "mission capable" refer to the same status:
Equipment is on hand and ready to perform its combat missions.
(See DA PAM 750-8.)

6. EQUIPMENT NOT READY/AVAILABLE IF column tells you when your semitrailer is nonmission capable and why the semitrailer cannot be used.

PMCS PROCEDURES - Continued

7. When you do your PMCS, you will always need a rag or two. Following are checks that are common to the entire semitrailer:
 - a. Keep It Clean. Dirt, grease, oil, and debris may cover up a serious problem. Clean as you work and as needed. Use cleaning solvent (WP 0137, Table 1, Item 6) on all metal surfaces. Use detergent (WP 0137, Table 1, Item 18) and water on rubber, plastic, and painted surfaces.
 - b. Rust and Corrosion. Check semitrailer body and frame for rust and corrosion. If any bare metal or corrosion exists, clean and apply a thin coat of light oil.
 - c. Bolts, Nuts, and Screws. Ensure that none are loose, missing, bent, or broken. Tighten any that are loose.
 - d. Welds. Look for loose or chipped paint, rust, or cracks where parts are welded together. If you find a bad weld, notify Field Maintenance.
 - e. Wiring Harness, Wires, and Connectors. Inspect for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors. If you find damaged wiring, notify Field Maintenance.
 - f. Hoses, Lines, and Fittings. Inspect for wear, damage, and air leaks. Ensure that fittings are tight. If an air leak originates from a loose fitting, tighten it. If a component is broken or worn, correct problem if authorized by the Maintenance Allocation Chart (MAC) (WP 0134). If not authorized, notify Field Maintenance.
8. When you check for "operating condition," you look at the component to see if it is serviceable.

CLEANING AGENTS**WARNING**

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.

CLEANING AGENTS - Continued**WARNING**

- General purpose liquid nonionic detergent (MIL-D-16791) may be irritating to the eyes and skin. Wear protective clothing, gloves, and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use general purpose liquid nonionic detergent (MIL-D-16791) in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: seek immediate medical attention. If person is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. If person is unconscious, or convulsing, DO NOT induce vomiting or give anything by mouth. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-D-16791 detergent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed and store in a cool, dry place when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

CAUTION

- DO NOT allow cleaning compounds to come into contact with rubber, leather, vinyl, or canvas materials. Failure to comply may result in equipment damage.
- Use only those authorized cleaning solvents or agents listed in WP 0137. Failure to comply may result in equipment damage.
- DO NOT use high-pressure water or steam to clean the semitrailer. Use only low-pressure water and bristled brushes. Be especially careful when cleaning electrical system components including lighting. Failure to comply may result in equipment damage.

CLEANING AGENTS - Continued

1. Cleaning is an AFTER operation service performed by the operator to maintain the semitrailer in a state of readiness. Facilities and material available for cleaning may vary in different operating conditions. However, semitrailer must be kept as clean as possible as available cleaning equipment, materials, and tactical situations permit.
2. Allow wet brakes to dry before using semitrailer.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Personnel Required

(2)

Materials/Parts

Rag, Wiping (WP 0137, Table 1, Item 36)

References

WP 0024
WP 0085

Table 1. Preventive Maintenance Checks and Services (PMCS).

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before	Bulkhead	<p>CAUTION</p> <p>Reference prime mover Technical Manual (TM). Ensure all operations are adhered to, e.g., coupling, fifth wheel load and position, load capabilities, speeds, on/off road operation, and adverse weather/road operations. Failure to comply may result in equipment damage.</p> <p>NOTE</p> <p>Perform "Weekly" as well as "Before" PMCS if:</p> <ul style="list-style-type: none"> You are the assigned operator but have not operated the semitrailer since the last Weekly PMCS. You are operating the semitrailer for the first time. <p>1. Check for loose or missing hardware.</p> <p>2. Check for serviceability and presence of side panels, tarps, bows, safety ladder, and Basic Issue Items (BII) as required by mission.</p>	<p>Hardware is loose or missing.</p> <p>Components, if required by mission, are unserviceable or missing.</p>
2	Before	Kingpin	<p>NOTE</p> <p>Perform the following inspections and checks before connecting the semitrailer to the prime mover.</p> <p>1. Visually inspect kingpin for obvious damage, wear, and corrosion. Ensure kingpin and bolster plate are greased.</p> <p>2. Visually inspect bolster plate for obvious damage, bowing, cracked welds, or excessive corrosion.</p> <p>3. Ensure bolster plate drain holes are not plugged.</p>	<p>Kingpin is damaged or shows obvious wear.</p> <p>Bolster plate is bowed, welds are cracked, or excessive corrosion present.</p> <p>Bolster plate drain holes are plugged.</p>
3	Before	Converter Box	Check for obvious damage or missing hardware.	Hardware is damaged or missing.
4	Before	Voltage Receptacles	Visually check for damage.	Receptacles are damaged.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before	Gladhands	Inspect gladhands for damage, missing or worn/ cracked packing seals, missing hardware, and free swing-away operation.	Gladhands are damaged or have worn/cracked or missing packing seals, missing hardware, or restricted operation.
6	Before	Ground Boards	Check for presence and damaged/missing hardware.	Ground boards cannot be safely secured in brackets, or retaining hardware/ground boards are missing.
7	Before	Chock Blocks	Check for presence.	Blocks are not present.
8	Before	Intervehicular Air Hoses	<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> After coupling semitrailer with prime mover, the scissor shoes at the end of the landing legs must be unlocked, swung up, and locked in the up position to allow for maximum clearance. Failure to comply may result in equipment damage. Before uncoupling semitrailer, scissor shoes on the landing legs must be unlocked, swung down, and locked in the down position. Failure to comply may result in equipment damage. Chock front and rear of wheels before coupling/uncoupling. Failure to comply may result in equipment damage. <p style="text-align: center;">NOTE</p> <p>The following checks must be done with the prime mover coupled to the semitrailer. Assistance is required when coupling and checking semitrailer lights.</p> <p>Connect air lines to semitrailer gladhands. With prime mover engine running, check air lines and gladhands for air leaks.</p>	Air leaks are present.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before	Lights	<p>NOTE</p> <ul style="list-style-type: none"> Check for loose plug-in connectors. Ensure there is no debris between plug and connector and then ensure that plug-in is seated. Mission requirements, urgency, safety, and common sense should be considered when determining equipment not ready/available status of the semitrailer. <p>Connect intervehicular cable from prime mover to semitrailer. Check lights for damage, proper operation, presence, and missing hardware. Notify Field Maintenance if there are problems in operation or damage is present.</p>	Lights are damaged, do not operate, or are missing hardware. Equipment not ready/available if required for mission.
10	Before	Reflectors	Look for presence, damage, and missing hardware.	Reflectors are missing and required for mission.
11	Before	Antilock Brake System (ABS) Warning Light	<p>NOTE</p> <ul style="list-style-type: none"> Prime mover must be coupled before checking ABS warning light. ABS warning light should not stay on when semitrailer is moving above 4 mph (6.4 kph). If mission requirements do not allow for troubleshooting of brake system, continue with mission until brake system can be properly diagnosed by Field Maintenance. Only modulation will be affected, not stopping capacity of brake system. <p>Visually inspect that ABS warning light does not stay on after semitrailer is moving above 4 mph (6.4 kph).</p>	ABS light does not come on or stays on.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Before	Landing Leg Assembly	<p>CAUTION</p> <ul style="list-style-type: none"> • Use high gear for rapid lowering/raising of semitrailer without a load on deck. Failure to comply may result in equipment damage. • Use low gear for lifting/raising semitrailer with a load on deck. Failure to comply may result in equipment damage. • Leave landing legs in low gear, in the full up position, when traveling on the road. Low gear will prevent over-the-road vibration from causing legs to wind down (extend). Ensure crank handle is secure. Failure to comply may result in equipment damage. • Crank operation: facing crank, clockwise retracts (raises) legs, and counterclockwise extends (lowers) legs. Failure to comply may result in equipment damage. • Push in for high gear, pull out for low gear. Failure to comply may result in equipment damage. • Ensure landing legs are fully retracted and scissor shoes locked up before moving semitrailer. Failure to comply may result in equipment damage. <p>1. Engage landing leg crank handle and raise and lower legs. Pull crank and check low-speed operation. Check for binding, damage, unequal leg movement, and missing hardware.</p>	Landing leg missing, will not retract or extend, binds or hard to move.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			<p>WARNING</p>  <p>Ensure landing leg scissor assembly's retaining (hitch) pins are installed extending inward. If installed extending outward, they will be a contact hazard. Failure to comply may result in personnel injury. Seek medical attention in event of injury.</p> <p>2. Check that scissor shoes have free movement, hardware is present, and shoes securely lock in place.</p>	Scissor shoes bind, do not lock or unlock, and are missing hardware.
13	Before	Radial Tires and Wheels	<p>CAUTION</p> <p>Rust near wheel nuts can mean low torque. Check wheels (inner/outer) and hubcaps for grease leakage. When leakage is initially found, clean off all grease and recheck after operation. If grease leakage is still evident, notify Field Maintenance. Failure to comply may result in equipment damage.</p> <p>NOTE</p> <ul style="list-style-type: none"> All wheel flange nuts have right-hand threads. Cold radial tire pressure should be 115 psi (793 kPa) for all tires. <p>1. Inspect tires, including spare, for proper inflation, unusual tread wear, sidewall damage, cuts, foreign objects, valve stem damage, valve caps, and loose/missing dust shield plugs on wheels.</p>	Tires are not properly inflated, are damaged, or show unusual wear.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.





ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			<p>WARNING</p>  <p>Ensure spare tire and wheel assembly is secured in carrier and securing hardware is present. Failure to secure the spare tire may result in the spare tire falling off semitrailer. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.</p> <p>2. Check that spare tire is secure and securing hardware is present.</p> <p>3. Check wheels for damaged rims and rust.</p> <p>4. Check for loose or missing wheel nuts. Notify Field Maintenance to ensure all nuts are present and torqued to specifications.</p> <p>5. Retorque wheel nuts at first 100, 500, 1,000 miles (161, 805, 1,609 km), and every 6,000 miles (9,656 km) thereafter unless wheel is changed out. Then use retorque schedule. Notify Field Maintenance.</p>	<p>Securing hardware is unserviceable or missing.</p> <p>Wheel rims are damaged or rusty.</p> <p>Wheel nuts are loose or missing.</p> <p>Wheel nuts not torqued.</p>
14	Before	Spare Tire Carrier	<p>WARNING</p>    <p>Spare tire and wheel assembly weighs 179 lb (81 kg). Use two personnel to remove spare tire and wheel assembly from carrier or to install onto carrier. Slide spare tire and wheel assembly from carrier or onto carrier. Refrain from lifting spare tire and wheel assembly. Failure to comply may result in personnel injury. Seek medical attention in event of injury.</p> <p>NOTE</p> <p>When laid in carrier, convex side should be in the up position (stud holes up).</p> <p>Inspect spare tire carrier assembly for worn, loose, or missing securing hardware and cracked/broken welds.</p>	<p>Worn, loose, or missing hardware and cracked/broken welds are found.</p>

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.



ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
15	Before	Hubcaps and Hub Mileage Meter	<p>CAUTION</p> <p>DO NOT stand on hub mileage meter. Failure to comply may result in equipment damage.</p> <ol style="list-style-type: none"> 1. Inspect hubcaps for damage, loose or missing hardware, and leakage. 2. Inspect hub mileage meter for missing hardware, damage, and loose mounting bracket or gauge. 	<p>Hubcap is leaking grease, or hardware is loose or missing.</p> <p>Hardware is loose or missing.</p>
16	Before	Suspension	<p>WARNING</p>  <p>After first month or first 1,000 miles (1,609 km) (from hub mileage meter) of suspension repair, suspension nuts must be torqued. Refer to Field PMCS for proper torque procedure. Failure to comply may result in loss of suspension and parts. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.</p> <p>Visually inspect for broken or shifted leaf springs and loose or missing hardware. Notify Field Maintenance.</p>	<p>Springs have shifted or are broken, and hardware is loose or missing.</p>
17	Before	Air Reservoir Tanks	<p>WARNING</p>  <p>Wear eye protection when opening air reservoir drain valve, and avoid contact with the air stream. Failure to comply may result in personnel injury. Seek medical attention in event of injury.</p> <ol style="list-style-type: none"> 1. Ensure drain valves do not leak air. 2. Inspect air tanks for damage, loose fittings, missing hardware, and any evidence of air leakage. 3. Inspect drain valve pull cables for frayed or broken condition. 	<p>Drain valves leak air.</p> <p>Any air leaks are present or hardware is missing.</p>

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
18	Before	Stowage Box and Door	<ol style="list-style-type: none"> 1. Open and close door. Ensure hinge does not bind and all mounting/securing hardware is tight and present. 2. Ensure drain holes are not blocked. 3. Ensure jack is secure and door seal is in good condition. 4. Keep box clean and serviceable. 	Hardware is loose or missing.
19	Before	Twistlocks	<p style="text-align: center;">CAUTION</p> <p>Ensure there is no debris in International Organization for Standardization (ISO) container lock slots that would prevent twistlock engagement and positive locking. Failure to comply may result in equipment damage.</p> <p>Ensure there is no debris in lock pocket that would interfere with lock operation. Ensure twistlocks (all) operate freely and do not bind.</p>	Twistlocks are missing or inoperable and are required for mission.
20	Before	Tiedowns	<p style="text-align: center;">CAUTION</p> <p>Deformation of any part of tiedown is not allowed. Notify Field Maintenance. Failure to comply may result in equipment damage.</p> <p>Check all tiedowns for missing hardware, damage, cracked welds, and deformation.</p>	Damaged, deformed, and cracked welds are evident.
21	Before	Brakes	With prime mover coupled, before start of mission, have a person observe if semitrailer brakes are working. Hold brake pedal down and try to slowly move prime mover forward. Observe if semitrailer tires move.	Brakes do not work.
22	During	ABS Warning Light	<p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • If ABS warning light stays on during mission, continue on with mission until brake system can be properly diagnosed by Field Maintenance. Braking capacity will not be impaired. The only effect will be no modulation at wheel or wheels that have a fault. • During blackout mode conditions, tape over ABS warning light. DO NOT remove or otherwise disable light. <p>Check that ABS warning light does not stay on after trailer is moving above 4 mph (6.4 kph).</p>	

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
23	During	Axles and Suspension	Listen for unusual noises, which are indications of possible problems. Be aware of conditions such as side pull, wandering, tracking of semitrailer, and load shift.	Unusual noises or semitrailer wanders, pulls to either side, or does not track.
24	During	General	Be aware of all conditions that may indicate unsafe operation or improperly secured cargo. Ensure all prime mover TM procedures, i.e., coupling load limits, speeds, and fifth wheel settings for on/off road operation, are adhered to for safe operation.	Unsafe conditions are identified.
25	After	Landing Leg Assembly	<p>CAUTION</p> <p>DO NOT use high-speed cranking mode for lifting and lowering of landing legs if there is a load on the semitrailer. Failure to comply may result in equipment damage.</p> <p>Inspect gearbox, braces, and leg assemblies for proper operation and tight mounting hardware. Ensure there is no binding in operation, equal leg movement, and the hand crank is present and can be safely stowed.</p>	Legs bind, are unequal in movement, or are missing hardware. Hand crank cannot be safely stowed.
26	After	Brake System	<p>WARNING</p>  <p>A hot brake drum can cause serious burns. Exercise extreme caution before attempting to touch brake drum after use. Radiated heat will be felt before brake drum is touched. Failure to comply may result in personnel injury. Seek medical attention in event of injury.</p> <p>Cautiously feel brake drums for abnormal heat or cold. An abnormally hot drum indicates a possible dragging or grabbing brake. An abnormally cool drum indicates improper adjustment or a defective brake.</p>	Brake drums are abnormally hot or cold.
27	After	Air Reservoir Tanks	Pull reservoir drain cables to remove all condensation (WP 0024).	System is not drained of moisture.
28	After	Bolster Plate Drain Holes	Ensure bolster plate drain holes are not plugged with grease or debris.	Bolster plate drain holes are plugged.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
29	After	Semitrailer Cleanliness	<p>1. After operation, especially in mud, salt environment, or fording conditions, flush out axles, axle ends, suspension, landing legs, underside/topside of semitrailer, and stowage box with clean, low-pressure water.</p> <p>2. Clean and lubricate all parts as specified in WP 0085 to ensure water/debris is flushed out of system.</p> <p>3. Check all electrical connections for corrosion and security.</p> <p>4. Ensure all painted surfaces are touched up where necessary to prevent rust.</p>	Flushout not accomplished when mission permits or is completed.
30	Weekly	Wheels	<p>NOTE</p> <p>Mission requirements, urgency, safety, and common sense should be considered when determining equipment not ready/available status of semitrailer.</p> <p>Check all wheels for handhold cracks and for cracks between and around stud holes, rust streaks, and grease stains.</p>	Cracks or leakage are evident.
31	Monthly	Frame and Decking	Perform a visual inspection of semitrailer for evidence of corrosion and condition of upper and lower deck wood. Visually check all welds for rust and cracks.	

PMCS Mandatory Replacement Parts List

There are no replacement parts required for these PMCS procedures.

END OF TASK

END OF WORK PACKAGE

CHAPTER 6

FIELD PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INSTRUCTIONS

WORK PACKAGE INDEX

Title	WP Sequence No.
FIELD PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION.....	WP 0021
FIELD PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS).....	WP 0022

FIELD MAINTENANCE

FIELD PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION

GENERAL

Preventive Maintenance Checks and Services (PMCS) means systematic caring, inspecting, and servicing of equipment to keep it in good condition and to prevent breakdowns. As the provider of Field-level checks and services, your mission is to:

1. Perform your PMCS at the correct intervals as indicated. Always do your PMCS in the same order, so it gets to be a habit. Once you have had some practice, you will quickly spot anything wrong.
2. Do your QUARTERLY PMCS every 3 months. Pay attention to Warnings, Cautions, and Notes.
3. Do your SEMI-ANNUAL PMCS every 6 months. Pay attention to Warnings, Cautions, and Notes.
4. Use DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E to record any faults that you discover during the quarterly and semiannual PMCS, unless you can fix them. You DO NOT need to record faults that you fix.

PMCS PROCEDURES

1. Field PMCS Work Package (WP) lists inspections and care required to keep the semitrailer in good operating condition. It is set up so you can make your checks as you walk around the semitrailer.
2. The ITEM NO. column provides a logical sequence for PMCS to be performed and is used as a source of item number for the TM ITEM NO. column when recording PMCS results on DA Form 2404 or DA Form 5988-E.
3. The INTERVAL column tells you when to do a certain check or service.
4. The ITEM TO BE CHECKED OR SERVICED column lists the item to check or service.
5. The PROCEDURE column tells you how to do the required check or service. Carefully follow these instructions.

NOTE

The terms "ready/available" and "mission capable" refer to the same status:
Equipment is on hand and ready to perform its combat missions.
(See DA PAM 750-8.)

6. EQUIPMENT NOT READY/AVAILABLE IF column tells you when your semitrailer is nonmission capable and why the semitrailer cannot be used.
7. When you do your PMCS, you will always need a rag or two. Following are checks that are common to the entire semitrailer:
 - a. Keep It Clean. Dirt, grease, oil, and debris may cover up a serious problem. Clean as you work and as needed. Use cleaning solvent (WP 0137, Table 1, Item 6) on all metal surfaces. Use detergent (WP 0137, Table 1, Item 18) and water on rubber, plastic, and painted surfaces.
 - b. Rust and Corrosion. Check semitrailer body and frame for rust and corrosion. If any bare metal or corrosion exists, clean and apply a thin coat of light oil.
 - c. Bolts, Nuts, and Screws. Ensure that none are loose, missing, bent, or broken. Tighten any that are loose.
 - d. Welds. Look for loose or chipped paint, rust, or cracks where parts are welded together. If you find a bad weld, notify your supervisor.

PMCS PROCEDURES - Continued

- e. Wiring Harness, Wires, and Connectors. Inspect for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors.
 - f. Hoses, Lines, and Fittings. Inspect for wear, damage, and air leaks. Ensure that fittings are tight. If an air leak originates from a loose fitting, tighten it. If a component is broken or worn, correct problem.
8. When you check for "operating condition," you look at the component to see if it is serviceable.

CLEANING AGENTS**WARNING**

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.

CLEANING AGENTS - Continued**WARNING**

- General purpose liquid nonionic detergent (MIL-D-16791) may be irritating to the eyes and skin. Wear protective clothing, gloves, and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use general purpose liquid nonionic detergent (MIL-D-16791) in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: seek immediate medical attention. If person is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. If person is unconscious, or convulsing, DO NOT induce vomiting or give anything by mouth. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-D-16791 detergent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed and store in a cool, dry place when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

CAUTION

- DO NOT allow cleaning compounds to come into contact with rubber, leather, vinyl, or canvas materials. Failure to comply may result in equipment damage.
 - Use only those authorized cleaning solvents or agents listed in WP 0137. Failure to comply may result in equipment damage.
 - DO NOT use high-pressure water or steam to clean the semitrailer. Use only low-pressure water and bristled brushes. Be especially careful when cleaning electrical system components including lighting. Failure to comply may result in equipment damage.
1. Cleaning is an AFTER operation service performed by the operator to maintain the semitrailer in a state of readiness. Facilities and material available for cleaning may vary in different operating conditions. However, semitrailer must be kept as clean as possible as available cleaning equipment, materials, and tactical situations permit.
 2. Allow wet brakes to dry before using semitrailer.

END OF WORK PACKAGE

FIELD MAINTENANCE
FIELD PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Gage, Profile, Kingpin (WP 0138, Table 1, Item 9)
Straightedge, 48 in. (122 cm)
(WP 0138, Table 1, Item 21)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)
Brush, Scrub (WP 0137, Table 1, Item 3)
Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Detergent (WP 0137, Table 1, Item 18)
Grease, Automotive and Artillery
(WP 0137, Table 1, Item 19)

Materials/Parts (cont.)

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Linseed Oil, Boiled (WP 0137, Table 1, Item 26)
Rag, Wiping (WP 0137, Table 1, Item 36)

Personnel Required

(2)

References

WP 0037
WP 0038
WP 0050
WP 0058
WP 0059
WP 0085

Table 1. Preventive Maintenance Checks and Services (PMCS).


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:												
			<p>NOTE</p> <p>Perform Operator PMCS prior to, or in conjunction with, Field PMCS if there is a delay between daily operation of the equipment and the Field PMCS or regular operator is not assisting/participating.</p>													
1	First Month or First 1,000 Miles (1,609 Km) of Operation	Suspension	<p>WARNING</p> <div></div> <p>After first month or first 1,000 miles (1,609 km) of suspension repair, suspension nuts must be torqued. Refer to Field PMCS for proper torque procedure. Failure to comply may result in loss of suspension and parts. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.</p> <p>NOTE</p> <p>Clean axle and suspension system with low-pressure water and fiber brush to allow for careful inspection.</p> <p>1. Tighten suspension nuts to the following in-service Dry torque values:</p> <table><tr><td>1-1/8 in. 12 UNF:</td><td>880 lb-ft (1,193 N•m)</td></tr><tr><td>3/4 in. 16 UNF:</td><td>300 lb-ft (407 N•m)</td></tr><tr><td>5/8 in. 18 UNF:</td><td>180 lb-ft (244 N•m)</td></tr></table> <p>2. New replacement installations/hardware should have Wet (oiled) fasteners. The following Wet torque values apply:</p> <table><tr><td>1-1/8 in. 12 UNF:</td><td>670 lb-ft (908 N•m)</td></tr><tr><td>3/4 in. 16 UNF:</td><td>220 lb-ft (298 N•m)</td></tr><tr><td>5/8 in. 18 UNF:</td><td>130 lb-ft (176 N•m)</td></tr></table>	1-1/8 in. 12 UNF:	880 lb-ft (1,193 N•m)	3/4 in. 16 UNF:	300 lb-ft (407 N•m)	5/8 in. 18 UNF:	180 lb-ft (244 N•m)	1-1/8 in. 12 UNF:	670 lb-ft (908 N•m)	3/4 in. 16 UNF:	220 lb-ft (298 N•m)	5/8 in. 18 UNF:	130 lb-ft (176 N•m)	Torque service requirements/schedule are not met. Nuts or bolts are damaged.
1-1/8 in. 12 UNF:	880 lb-ft (1,193 N•m)															
3/4 in. 16 UNF:	300 lb-ft (407 N•m)															
5/8 in. 18 UNF:	180 lb-ft (244 N•m)															
1-1/8 in. 12 UNF:	670 lb-ft (908 N•m)															
3/4 in. 16 UNF:	220 lb-ft (298 N•m)															
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Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Semiannual	Bolster Plate and Kingpin Support Structure	<p>CAUTION</p> <ul style="list-style-type: none"> Ensure bolster plate does not have any bumps, valleys, or warping, which will cause uneven loading of the fifth wheel and could result in damage to the top plate and poor lock life. Failure to comply may result in equipment damage. Ensure the bolster plate does not bow upward (concave) more than 1/16 in. (1.58 mm) within a 19 in. (48.26 cm) radius from kingpin. Failure to comply may result in equipment damage. Ensure the bolster plate does not bow downward (convex) more than 1/4 in. (6.35 mm) within a 19 in. (48.26 cm) radius from kingpin or more than 1/8 in. (3.18 mm) at a 10 in. (254 mm) radius from kingpin. Failure to comply may result in equipment damage. <p>1. Clean bolster plate and kingpin. Regrease after checks are completed (WP 0085).</p> <p>2. Check flatness of bolster plate using a 48 in. (1.22 m) straightedge. Check flat edge in all directions.</p> <p>3. Using a small inspection mirror and flashlight, inspect the top and bottom sides of the bolster plate and kingpin support structure for corrosion or rust. Access top side of bolster plate and kingpin support structure through drain holes or by temporarily removing the converter box.</p>	<p>Bolster plate is not within specified parameters.</p> <p>Excessive corrosion present.</p>
3	Semiannual	Kingpin	<p>NOTE</p> <p>Use kingpin gauge to check wear, straightness, and flatness of kingpin and bolster plate.</p> <p>1. Inspect kingpin for straightness using a kingpin gauge.</p>	Kingpin is not square.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			<p>2. Lube and clean kingpin and plate (WP 0085).</p> <p>NOTE</p> <p>Dimensions are for both the mushroom base and cruciform kingpins.</p> <p>3. Dimensions and wear:</p> <p>a. Length: 3.324 + 0.010 to 0.000 in. (84.43 + 0.25 to 0.00 mm) (new).</p> <p>b. Wear: upper diameter at the bolster plate should measure:</p> <p>New: 2.875 in. (73.03 mm) Worn: Max. 2.75 in. (69.9 mm)</p> <p>c. The flat surfaces above and below the locking area are allowed no wear.</p> <p>d. Fifth wheel locking area on kingpin should measure:</p> <p>New: 2.000 in. (50.8 mm) Worn: Max. 1.87 in. (47.5 mm)</p> <p>e. Surface damage criteria: any burrs, nicks, or gouges that exceed 0.12 in. (3.1 mm) in depth, or burrs that exceed this measurement in height on the upper diameter at bolster plate and/or at the locking area of kingpin, should have kingpin replaced.</p>	<p>Wear meets or exceeds maximum.</p> <p>Wear is evident.</p> <p>Wear meets or exceeds maximum.</p> <p>Surface damage meets or exceeds criteria.</p>
			<p>f. No burrs, nicks, or gouges are allowed on the lower collar area of the kingpin below the locking area.</p>	<p>Damage meets or exceeds criteria.</p>

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			<p>CAUTION</p> <p>When replacing kingpin, inspect all supporting structures for rust, broken welds, and proper drainage. Structure area interior must be inspected and protected against rust. Proper drainage must be maintained. Failure to comply may result in equipment damage.</p> <p>g. The area against the bolster plate and locking area on the kingpin should have no more than 10 burrs, nicks, or gouges that exceed 0.06 in. (1.5 mm) in depth on the entire surface area. If these criteria are met or exceeded, replace the kingpin.</p> <p>h. Any burrs, nicks, or gouges that meet or exceed 0.25 in. (6.4 mm) in length will require replacement of the kingpin.</p>	<p>Damage meets or exceeds criteria.</p> <p>Damage meets or exceeds criteria.</p>
4	Semiannual	Converter Box	<p>WARNING</p>  <p>Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.</p> <p>Check converter box and wiring for damage and connectors for security and corrosion. Use silicone electric grease on all electrical contacts.</p>	<p>Wiring damaged, not secured, or corroded.</p>
5	Semiannual	Landing Legs	Check alignment of landing legs with a square. Legs must be parallel and square with semitrailer.	Legs are not parallel or square with semitrailer.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:												
6	Semiannual	Main Electrical Harness and All Electrical Connections	<div><p>WARNING</p></div> <p>Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.</p> <p>Check condition of electrical harness for wear, frayed insulation, corrosion, and that connectors are secured. Use silicone electric grease on all electrical contacts.</p>	Harness is worn through, corroded, or unsecured. Electrical connections are loose or corroded.												
7	Semiannual	Suspension	<p>1. Check serviceability of suspension hardware. Check for wear and damage.</p> <p>2. Tighten suspension nuts to the following in-service Dry torque values:</p> <table><tr><td>1-1/8 in 12 UNF:</td><td>880 lb-ft (1,193 N•m)</td></tr><tr><td>3/4 in. 16 UNF:</td><td>300 lb-ft (407 N•m)</td></tr><tr><td>5/8 in. 18 UNF:</td><td>180 lb-ft (244 N•m)</td></tr></table> <p>3. New replacement installations/hardware should have Wet (oiled) fasteners. The following Wet torque values apply:</p> <table><tr><td>1-1/8 in. 12 UNF:</td><td>670 lb-ft (908 N•m)</td></tr><tr><td>3/4 in. 16 UNF:</td><td>220 lb-ft (298 N•m)</td></tr><tr><td>5/8 in. 18 UNF:</td><td>130 lb-ft (176 N•m)</td></tr></table>	1-1/8 in 12 UNF:	880 lb-ft (1,193 N•m)	3/4 in. 16 UNF:	300 lb-ft (407 N•m)	5/8 in. 18 UNF:	180 lb-ft (244 N•m)	1-1/8 in. 12 UNF:	670 lb-ft (908 N•m)	3/4 in. 16 UNF:	220 lb-ft (298 N•m)	5/8 in. 18 UNF:	130 lb-ft (176 N•m)	<p>Threads are worn or hardware damaged.</p> <p>Threads are worn or hardware damaged.</p> <p>Suspension nuts not tightened to correct torque values.</p>
1-1/8 in 12 UNF:	880 lb-ft (1,193 N•m)															
3/4 in. 16 UNF:	300 lb-ft (407 N•m)															
5/8 in. 18 UNF:	180 lb-ft (244 N•m)															
1-1/8 in. 12 UNF:	670 lb-ft (908 N•m)															
3/4 in. 16 UNF:	220 lb-ft (298 N•m)															
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Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Semiannual	Leaf Springs and Attaching Parts	<p>1. Check for missing or damaged hangers, end caps, spring seats, adjustment plates, and hardware.</p> <p>2. Check for the following:</p> <p>a. One or more of the leaves in any spring assembly are broken.</p> <p>b. Any leaf or portion of any leaf in any spring assembly is missing or separated.</p> <p>NOTE</p> <p>The three bottom leaves of each spring pack are the main leaves in each pack.</p> <p>c. Any broken main leaf in a spring assembly.</p>	<p>Leaf spring attachments or hardware are missing.</p> <p>Broken leaf or leaves are not replaced.</p> <p>Leaf is missing or separated.</p> <p>Main leaf is broken not replaced.</p>
9	Semiannual	Hub Mileage Meter	<p>CAUTION</p> <ul style="list-style-type: none"> DO NOT use paints or solvents on hub mileage meter polycarbonate face. Failure to comply may result in equipment damage. DO NOT stand on hub mileage meter. Failure to comply may result in equipment damage. <p>NOTE</p> <ul style="list-style-type: none"> If hub mileage meter has a bent or stripped stud, case damage, improper bracket, or hardware or case tampering, it will not perform properly. Inside hub cap should have a light coat of grease. DO NOT plug vent hole. <p>Check hub mileage meter bracket and gauge for looseness and missing hardware. Tighten gauge nut to torque of 15 lb-ft (20.3 N•m) max.</p>	
10	Semiannual	Hub Caps	Check hub caps (4 each) for leaks, damage, and missing hardware, and tighten nuts to torque of 15 lb-ft (20.3 N•m) max.	

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Semiannual	Reflectors	<p>WARNING</p>  <ul style="list-style-type: none"> Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury. DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury. <p>If reflectors are broken or missing replace. If screws are removed/replaced, apply a light coat of antiseize compound to all threads.</p>	

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Semiannual	Air Brake Chamber	<p style="text-align: center;">WARNING</p>  <ul style="list-style-type: none"> Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of, or in line with, the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury. Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury. DO NOT use prime mover air pressure or power driven impact tools to cage the air brake chamber. Excessive torque can cause damage to the spring pressure plate resulting in sudden release of the spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury. <p>Clean and visually inspect clamp bands, castings (case), and fasteners for looseness, damage, and missing hardware or leaking air.</p>	Hardware is loose or missing or castings are damaged or leaking air.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	Semiannual	Studs and Flange Nuts	<p>1. Check studs and flange nuts for damage.</p> <p>NOTE</p> <p>All flange nuts and studs have right-hand threads.</p> <p>2. Tighten flange nuts to torque of 50 lb-ft (67.8 N•m), and then tighten to 450 to 500 lb-ft (610 to 678 N•m) using Dry torque.</p> <p>3. Use Dry torque for flange nuts and studs, facing wheel, clockwise sequence starting at top.</p>	Studs or flange nuts are damaged or loose. Any nuts or studs are missing.
14	Semiannual	Automatic Slack Adjusters (ASAs)	<p>CAUTION</p> <p>DO NOT use air or electric tools to adjust ASAs. Start initial adjusting procedures with measurements, not teardown. Failure to comply may cause equipment damage.</p> <p>Check for any binding; broken, worn, or loose parts; missing hardware; evidence of an out-of-adjustment condition; worn clutch; and release action.</p>	Binding, wear, loose parts, missing hardware, out-of-adjustment conditions are evident.
15	Annual	Axles	Check axles for proper alignment (WP 0037).	Axles are not in alignment.
16	Annual	Wood Decking Corrosion	<p>WARNING</p>  <p>Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.</p> <p>Clean and inspect for broken, missing boards. Apply a thin coat of linseed oil protector to upper and lower deck surfaces.</p>	Board(s) are broken or missing.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.


ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
17	Triennial	Wheel Bearings	<p>WARNING</p>  <ul style="list-style-type: none"> DO NOT use air pressure or a steel bristle brush to clean cones and rollers. Use approved cleaning solvent to clean bearings. DO NOT use gasoline. DO NOT rotate bearings using compressed air as this will damage the polished surfaces. Failure to comply may result in personnel injury. Seek medical attention in event of injury. At triennial brake inspection/service, all brake wheel end components must be cleaned and inspected for wear and damage. Inspect all linings, springs, pins, rollers, clips, and bushings on each axle end. Ensure seals show no signs of leakage on axle, spider, or wheels. Use all components of replacement kits, and balance repairs on both axle ends. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury. <p>Clean, inspect, and repack inner and outer cones and rollers. Replace if damaged or worn (WP 0050).</p>	Components worn or damaged.
18	Triennial	Seals	Check condition of seals for indicators of problems. When seal is removed, it should be replaced. Use correct seal installation tool to drive/set seal, and never reuse a seal.	Seal is damaged, worn, or leaking.
19	Triennial	Spindle	Check spindle for damaged threads and surface area for rust/pitting.	Spindle is damaged.
20	Triennial	Brake Drums	Check drums for cracking, heat discoloration, grooving, elongated bolt holes, out-of-round, or wear beyond rebore limit on drum.	Drum is cracked, severely overheated, has elongated holes, or is out-of-round.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.



ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
21	Triennial	ABS Sensors	<p>CAUTION</p> <p>Push sensor to tone ring using a wooden rod or by hand. Sensor should be pushed against tone ring and will self-adjust in use. A gap of 0.040 in. (1.02 mm) is allowable. Excessive gap may cause diagnostic fault. Failure to comply may result in equipment damage.</p> <p>Check that sensor pickups are lightly touching tone ring or have a gap of no more than 0.040 in. (1.02 mm) between the tone ring and pickup end.</p>	
22	Triennial	Brake Systems	<p>WARNING</p>  <p>DO NOT allow brake lining to wear to the point that the rivets touch the brake drum. This condition can cause brake failure. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.</p> <p>CAUTION</p> <p>To ensure a balanced braking system, both brake assemblies on an axle end should have like repairs accomplished at the same time. Failure to comply may result in equipment damage.</p> <p>1. Check brake lining thickness, springs, anchor pins, bushings, and rollers for damage and wear.</p> <p>2. See WP 0085 for lubrication points.</p>	<p>Linings are worn to limit. Springs, anchor pins, bushings, and rollers are damaged or worn.</p>
23	Triennial	S-Cams	<p>Check for wear and damage to spline, bushings, cam lobes, and retaining brackets. Replace bushings (WP 0038).</p>	<p>Damage/wear affects operation.</p>

Table 1. Preventive Maintenance Checks and Services (PMCS) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24	Triennial	Hubs	<p>WARNING</p>  <ul style="list-style-type: none"> A hot brake drum can cause serious burns. Exercise extreme caution before attempting to touch brake drum after use. Radiated heat will be felt before brake drum is touched. Failure to comply may result in personnel injury. Seek medical attention in event of injury. The triennial (3-year) 36,000 mi (57,936 km) check/service is based on normal operation. Conditions identified, such as hot/cold brake drums, leakage/seepage of spindle/hub grease, brake lockup, wheel end noise/damage, and impact damage will require inspection and repair when the incident occurs, not at service interval. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury. <p>Clean and check hubs for wear and damage, including tone rings. Replace hub with tone ring if damaged or worn (WP 0050).</p>	Hub or tone ring is worn or damaged.

PMCS Mandatory Replacement Parts List

There are no replacement parts required for these PMCS procedures.

END OF TASK

END OF WORK PACKAGE

CHAPTER 7

OPERATOR MAINTENANCE

WORK PACKAGE INDEX

Title	WP Sequence No.
ELECTRICAL CONNECTORS CLEANING.....	WP 0023
AIR RESERVOIRS SERVICE.....	WP 0024
GLADHANDS CLEANING.....	WP 0025
TIRE AND WHEEL ASSEMBLY REPLACEMENT.....	WP 0026
SPARE TIRE AND WHEEL ASSEMBLY REPLACEMENT.....	WP 0027
LANDING LEGS CLEANING.....	WP 0028

OPERATOR MAINTENANCE ELECTRICAL CONNECTORS CLEANING

INITIAL SETUP:

Materials/Parts

Brush, Scrub (WP 0137, Table 1, Item 3)
Detergent (WP 0137, Table 1, Item 18)
Rag, Wiping (WP 0137, Table 1, Item 36)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

References

WP 0085

Equipment Condition

Landing legs down (WP 0005)

WARNING



Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CLEANING**WARNING**

- General purpose liquid nonionic detergent (MIL-D-16791) may be irritating to the eyes and skin. Wear protective clothing, gloves, and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Use general purpose liquid nonionic detergent (MIL-D-16791) in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: seek immediate medical attention. If person is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. If person is unconscious, or convulsing, DO NOT induce vomiting or give anything by mouth. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - MIL-D-16791 detergent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed and store in a cool, dry place when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
1. Use a rag to remove any buildup of grease and dirt on electrical connectors (Figure 1, Item 1).
 2. Use a brush, detergent, and water to clean metal surfaces.
 3. Allow to dry.

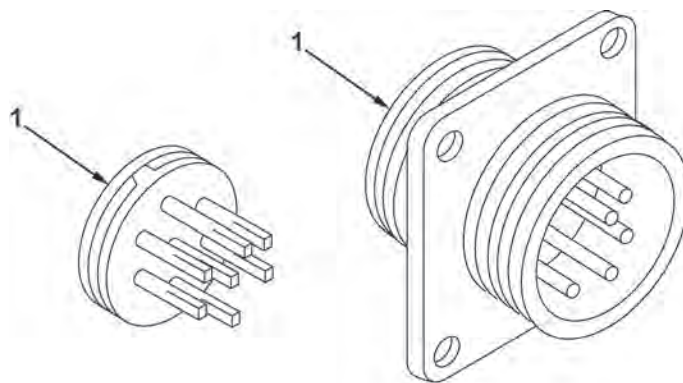


Figure 1. Electrical Connectors Cleaning.

END OF TASK

FOLLOW-ON TASKS

1. Coat pins with thin film of silicone electric grease (WP 0085).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Connect power source and test clearance lights for proper operation.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
AIR RESERVOIRS SERVICE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Rag, Wiping (WP 0137, Table 1, Item 36)

References

WP 0002

Equipment Condition

Landing legs down (WP 0005)

WARNING

Wear eye protection when opening air reservoir drain valve, and avoid contact with the air stream. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

Refer to WP 0002, Figure 2 for location of cables.

SERVICE

1. Turn off air supply to semitrailer.
2. Unhook gladhands from air hose couplings (WP 0005).
3. Pull cable (Figure 1, Item 1) to open drain valve (Figure 1, Item 2), and allow pressure to drain.
4. Release cable (Figure 1, Item 1) to close drain valve (Figure 1, Item 2).
5. Connect gladhands to air hose couplings (WP 0005).

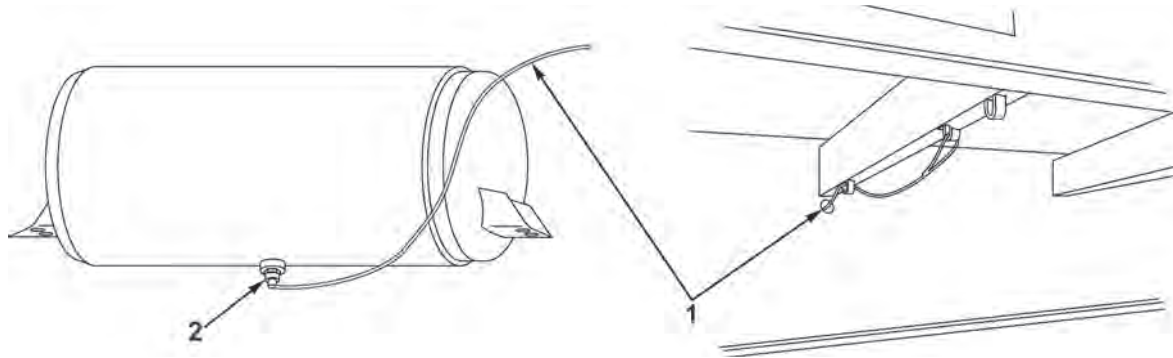


Figure 1. Drain Valve.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
GLADHANDS CLEANING**

INITIAL SETUP:**Materials/Parts**

Detergent (WP 0137, Table 1, Item 18)
Rag, Wiping (WP 0137, Table 1, Item 36)

Equipment Condition

Landing legs down (WP 0005)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

NOTE

For the M871R, the dummy coupling has to be removed.

CLEANING**WARNING**

- General purpose liquid nonionic detergent (MIL-D-16791) may be irritating to the eyes and skin. Wear protective clothing, gloves, and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Use general purpose liquid nonionic detergent (MIL-D-16791) in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: seek immediate medical attention. If person is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. If person is unconscious, or convulsing, DO NOT induce vomiting or give anything by mouth. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - MIL-D-16791 detergent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed and store in a cool, dry place when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
1. Use a clean rag to remove any buildup of grease and dirt from gladhands (Figure 1, Item 1).
 2. Remove dust shield (Figure 1, Item 2) from gladhands (Figure 1, Item 1).
 3. Remove packing seal (Figure 1, Item 3), then using a clean rag, detergent, and water thoroughly clean packing seal (Figure 1, Item 3), and dust shield (Figure 1, Item 2).
 4. Allow to dry.
 5. Reinstall dust shield (Figure 1, Item 2), and packing seal (Figure 1, Item 3) on gladhands (Figure 1, Item 1).

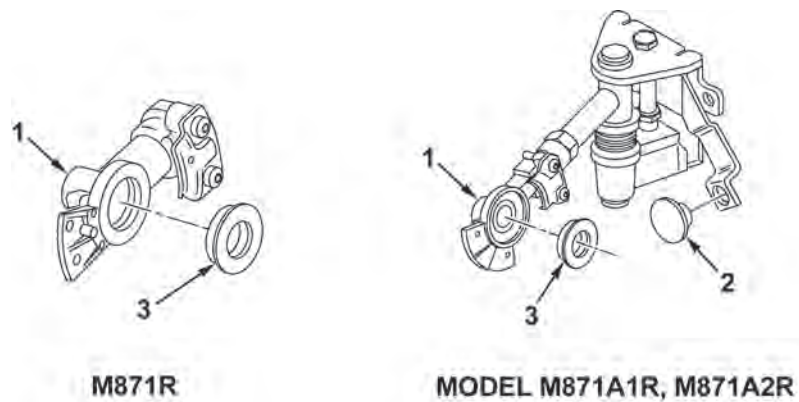
CLEANING - Continued

Figure 1. Gladhands Cleaning.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect intervehicular hoses (WP 0005) and check for leaks.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE TIRE AND WHEEL ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Jack (Prime Mover BII)
Lug Wrench (Prime Mover BII)
Wrench Bar (Prime Mover BII)

References

WP 0027
WP 0088

Materials/Parts

Lug Nut
Qty: AR (WP 0107, Figure 18, Item 6)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Personnel Required

(2)

WARNING



- Suitable support device must be positioned directly under axle to prevent slippage. Suitable support device must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Tire and wheel assembly weighs 179 lb (81 kg). Use two personnel to handle tire and wheel assembly. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- For service and repair tasks on the semitrailer, ground boards and wheel chocks should be used to ensure safe coupling and prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

NOTE

There are eight tire and wheel assemblies, and they are all replaced the same way. These procedures cover one tire and wheel assembly.

REMOVAL

1. Chock tires on axle not being lifted.
2. Position jack on ground board under axle closest to where tire(s) will be removed, as shown.
3. Loosen, but do not remove, ten lug nuts (Figure 1, Item 1) while tires are in contact with ground. If necessary, use wrench bar for additional leverage.
4. Use jack to raise axle until inner and outer tire and wheel assemblies (Figure 1, Items 2 and 3) clear the ground.
5. Remove ten lug nuts (Figure 1, Item 1), and two inner and outer tire and wheel assemblies (Figure 1, Items 2 and 3).
6. Check lug nuts and wheel studs for damage, and replace as needed.

END OF TASK**INSTALLATION**

1. Use a jack to raise axle high enough so the inner and outer tire and wheel assemblies (Figure 1, Items 2 and 3) can be mounted on the axle.
2. Install inner and outer tire and wheel assemblies (Figure 1, Items 2 and 3) and ten lug nuts (Figure 1, Item 1). Torque lug nuts (Figure 1, Item 1) to 50 lb-ft (68 N·m).
3. Tighten lug nuts (Figure 1, Item 1) in sequence shown (Figure 2).

WARNING

If nuts cannot be torqued, at first opportunity have Field Maintenance torque nuts to proper specifications. If mission allows, stop and check nuts for tightness. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

4. Lower tires and wheel assemblies (Figure 1, Items 2 and 3) to the ground and torque ten lug nuts (Figure 1, Item 1) to 450 to 500 lb-ft (610 to 678 N·m).
5. Stow jack, lug wrench, and wrench bar in prime mover.

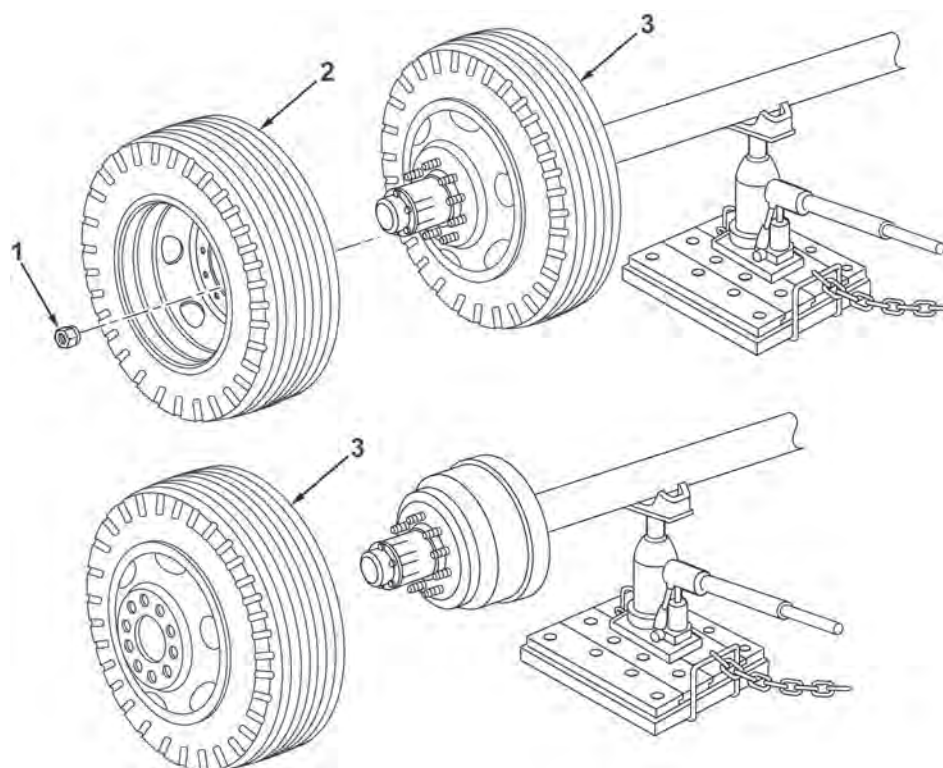
INSTALLATION - Continued

Figure 1. Tire and Wheel Assembly Removal and Installation.

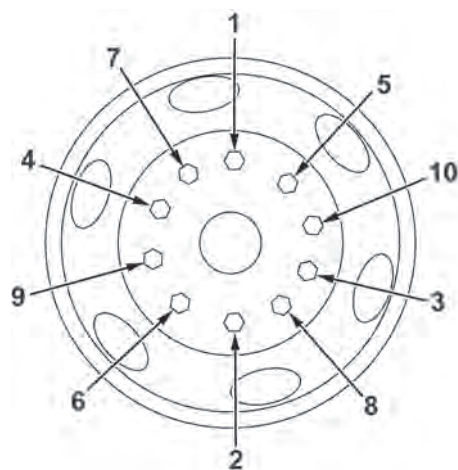


Figure 2. Lug Nut Tightening Sequence.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (if required) (WP 0005).
2. Raise landing legs (if required) (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Check air pressure for 115 psi (793 kPa).
5. Ensure Field Maintenance torques lug nuts when mission permits (WP 0088).
6. Store damaged inner or outer tire in spare tire carrier and secure (WP 0027).

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE
SPARE TIRE AND WHEEL ASSEMBLY REPLACEMENT

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition (cont.)

Wheels chocked (WP 0005)
Semitrailer properly connected to prime mover
(WP 0005)

Equipment Condition

Vehicle parked on level surface (WP 0005)

WARNING

Spare tire and wheel assembly weighs 179 lb (81 kg). Use two personnel to remove spare tire and wheel assembly from carrier or to install onto carrier. Slide spare tire and wheel assembly from carrier or onto carrier. Refrain from lifting spare tire and wheel assembly. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL

1. Unhook clip (Figure 1, Item 1) from chain (Figure 1, Item 2).
2. Pull/slide spare tire and wheel assembly (Figure 1, Item 4) from spare tire carrier (Figure 1, Item 3), and lower to ground with tire resting against spare tire carrier (Figure 1, Item 3).

END OF TASK**INSTALLATION**

1. Install spare tire and wheel assembly (Figure 1, Item 4) in spare tire carrier (Figure 1, Item 3).
2. Route chain (Figure 1, Item 2) through two outer holes in spare tire and wheel assembly (Figure 1, Item 4).
3. Bring end of chain (Figure 1, Item 2) up through center of spare tire and wheel assembly (Figure 1, Item 4).
4. Take up slack in chain (Figure 1, Item 2).
5. Hook clip (Figure 1, Item 1) to chain (Figure 1, Item 2) to secure spare tire and wheel assembly (Figure 1, Item 4).

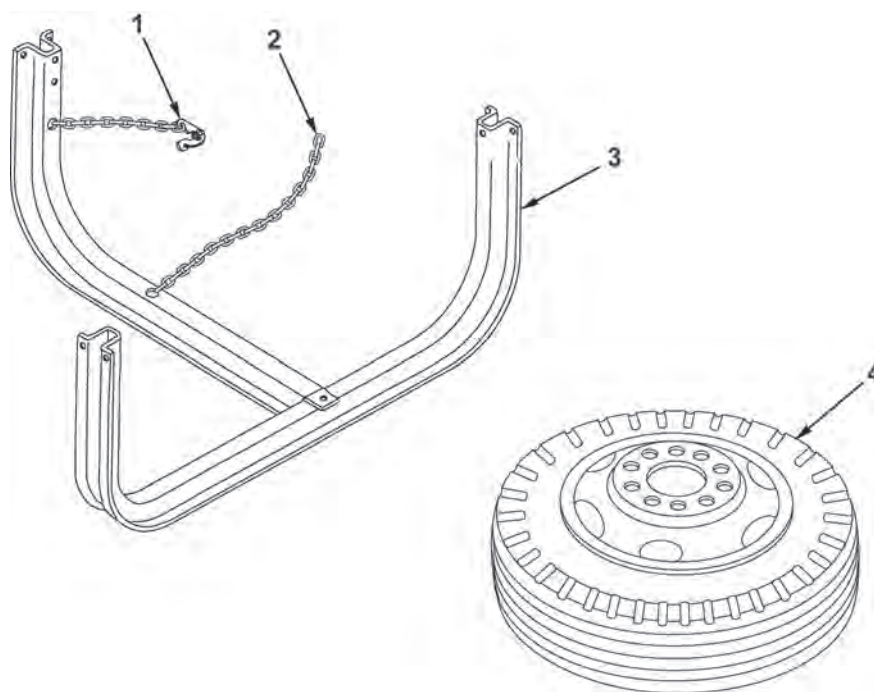


Figure 1. Spare Tire and Wheel Assembly Removal and Installation.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
LANDING LEGS CLEANING**

INITIAL SETUP:

Materials/Parts

Brush, Scrub (WP 0137, Table 1, Item 3)
Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Rag, Wiping (WP 0137, Table 1, Item 36)

WARNING

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.

CLEANING

1. Use a clean rag to remove any buildup of grease and dirt from landing leg (Figure 1, Item 1).
2. Use a brush, water, and cleaning solvent to thoroughly clean landing leg (Figure 1, Item 1).
3. Allow to dry.

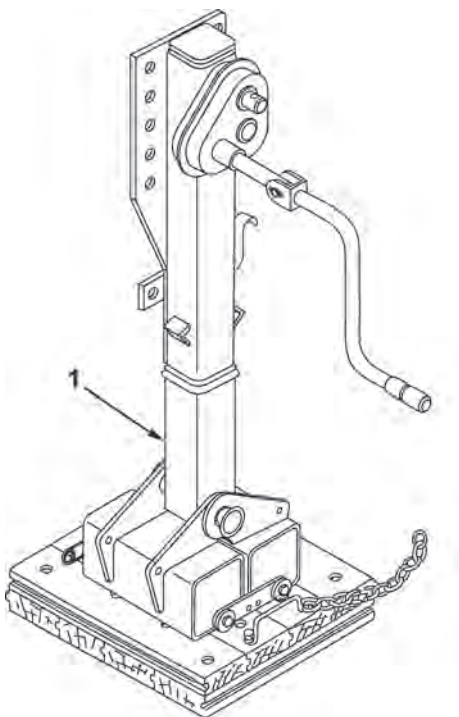


Figure 1. Landing Leg Cleaning.

END OF TASK

END OF WORK PACKAGE

CHAPTER 8

FIELD MAINTENANCE

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**FIELD MAINTENANCE
SERVICE UPON RECEIPT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Gloves (WP 0138, Table 1, Item 10)

Materials/Parts

Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Rag, Wiping (WP 0137, Table 1, Item 36)

References (cont.)

DA PAM 750-8
DD Form 314
DD Form 1397
WP 0020
WP 0022
WP 0085
WP 0135

References

DA Form 2407

GENERAL

When a new, used, or reconditioned semitrailer is first received, determine whether it has been properly prepared for service and is in condition to perform its mission. Follow the inspection instructions and servicing instructions specified in this Work Package (WP).

INSPECTION INSTRUCTIONS

1. Read and follow all instructions on DD Form 1397 attached to conspicuous part of semitrailer.
2. Remove all straps, plywood, tape, seals, and wrappings.

WARNING

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
 - Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.
3. Remove rust-preventive compound from coated exterior parts of semitrailer using solvent cleaning compound and rags.
 4. Inspect semitrailer for damage incurred during shipment. Also check to see if equipment has been modified.
 5. Check equipment against packing list to ensure that shipment is complete. Report any discrepancies in accordance with instructions in DA PAM 750-8.
 6. Inventory Basic Issue Items (BII) (WP 0135).

END OF TASK

SERVICING INSTRUCTIONS

1. Perform all operator/field Preventive Maintenance Checks and Services (PMCS) (WP 0020 and WP 0022). Schedule next PMCS on DD Form 314.
2. Lubricate all lubrication points as described in WP 0085 regardless of interval.
3. Report any problems on DA Form 2407.
4. Perform break-in road test of 25 miles (40 km) at maximum speed of 50 mph (80 kph).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE BLACKOUT LIGHTS REPLACEMENT

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Lockwasher Qty: 2 (WP 0090, Figure 1, Item 2)

References

WP 0035

Equipment Condition

Landing legs down (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

- Right and left blackout lights are removed and installed the same way. These procedures cover one blackout light.
- Refer to WP 0035 for electrical schematic.

REMOVAL

1. Disconnect two connectors (Figure 1, Item 1).
2. Remove two nuts (Figure 1, Item 4), lockwashers (Figure 1, Item 3), and blackout light (Figure 1, Item 2). Discard lockwashers (Figure 1, Item 3).

END OF TASK**INSTALLATION**

1. Install blackout light (Figure 1, Item 2), two new lockwashers (Figure 1, Item 3), and nuts (Figure 1, Item 4).

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

2. Apply silicone electric grease on pins, and then connect two connectors (Figure 1, Item 1).

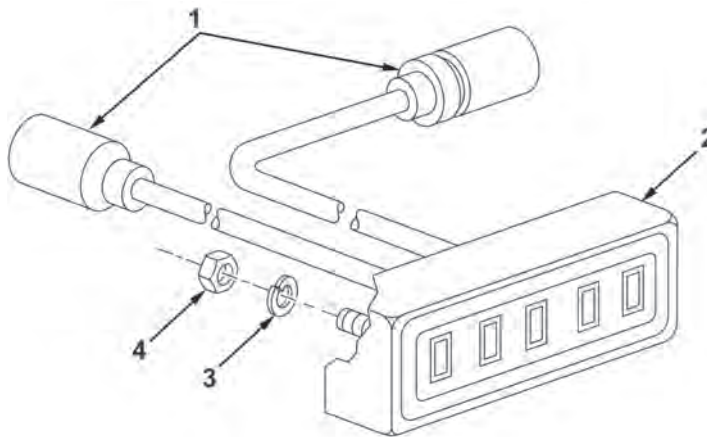


Figure 1. Blackout Light Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect power source and test blackout lights for proper operation.

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
CLEARANCE LIGHTS REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

WP 0035

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)
Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Self-Tapping Screw
Qty: 20 (WP 0091, Figure 2, Item 9)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

Refer to WP 0035 for electrical schematic.

REMOVAL

NOTE

There are nine clearance lights (Figure 1, Item 1 or 2) on the semitrailer. The two front clearance lights (Figure 1, Item 2) are held in place with three self-tapping screws (Figure 1, Item 3). The seven remaining side and rear clearance lights (Figure 1, Item 1) use two self-tapping screws (Figure 1, Item 3) each. These procedures remove and install one front clearance light (Figure 1, Item 2); the remaining clearance lights are removed and installed the same way.

1. Disconnect wiring harness from clearance light connector.
2. Remove self-tapping screws (Figure 1, Item 3) and front clearance light (Figure 1, Item 2). Discard self-tapping screws (Figure 1, Item 3).

END OF TASK

INSTALLATION

WARNING



- Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
 - DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
1. Apply antiseize compound to self-tapping screws (Figure 1, Item 3). Install front clearance light (Figure 1, Item 2) and three new self-tapping screws (Figure 1, Item 3).

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

2. Apply silicone electric grease to wiring harness pins. Connect wiring harness connector to clearance light connector.

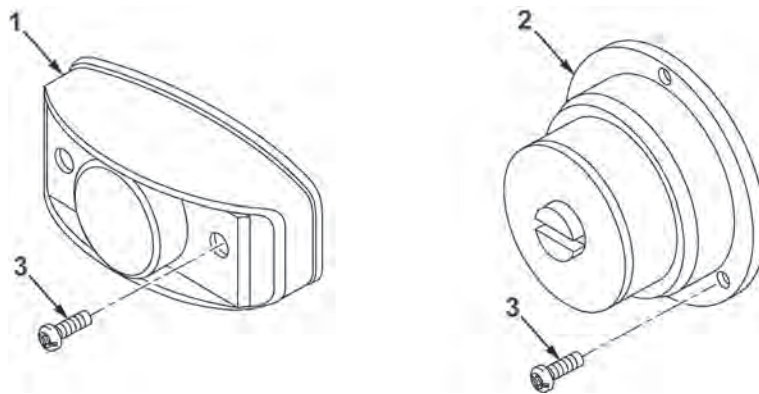
INSTALLATION - Continued

Figure 1. Clearance Light Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect power source and test clearance lights for proper operation.

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
LED TAILLIGHTS REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

WP 0035

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)
Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Self-Tapping Screw
Qty: 3 (WP 0092, Figure 3, Item 2)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

- There are four taillights, and they are removed and installed the same way. These procedures cover one taillight.
- Refer to WP 0035 for electrical schematic.

REMOVAL**NOTE**

Only the two outer taillights have ground wires.

1. Disconnect taillight connector (Figure 1, Item 2) from wiring harness connector.
2. Disconnect ground wire (Figure 1, Item 3) from taillight (Figure 1, Item 1), if necessary.
3. Remove three self-tapping screws (Figure 1, Item 4) and taillight (Figure 1, Item 1). Discard self-tapping screws (Figure 1, Item 4).

END OF TASK**INSTALLATION****WARNING**

- Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
 - DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
1. Use a light coat of antiseize compound on screws. Install taillight (Figure 1, Item 1) with three new self-tapping screws (Figure 1, Item 4).
 2. Connect ground wire (Figure 1, Item 3) to taillight (Figure 1, Item 1), if necessary.

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

3. Use silicone electric grease on pins. Connect taillight connector (Figure 1, Item 2) to wiring harness.

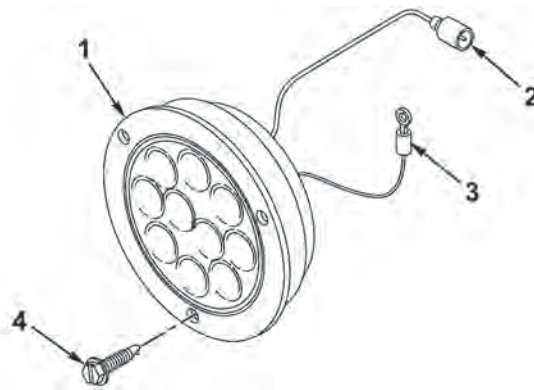
INSTALLATION - Continued

Figure 1. Taillight Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect power source and test taillights for proper operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
RECEPTACLE CONVERTER BOX REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts (cont.)

Qty: 4 (WP 0093, Figure 4, Item 5)

Materials/Parts

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Self-Tapping Screw

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CAUTION

The semitrailer's converter box and electrical system will be damaged if the 12-volt (7-pin) and 24-volt (12-pin) cables are plugged in at the same time. DO NOT plug in both the 12-volt (7-pin) and 24-volt (12-pin) cables at the same time. Failure to comply may result in equipment damage.

REMOVAL

1. Remove four self-tapping screws (Figure 1, Item 1), and pull out receptacle converter box (Figures 1 and 2, Item 2) from semitrailer. Discard self-tapping screws (Figure 1, Item 1).
2. Disconnect cable (Figure 2, Item 1) from semitrailer wiring harness, and remove receptacle converter box (Figures 1 and 2, Item 2) from semitrailer.

END OF TASK**INSTALLATION****WARNING**

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

1. Apply silicone electric grease to all connector pins.
2. Connect cable (Figure 2, Item 1) to semitrailer wiring harness, and position receptacle converter box (Figures 1 and 2, Item 2) on semitrailer.
3. Install four new self-tapping screws (Figure 1, Item 1), securing receptacle converter box (Figures 1 and 2, Item 2) to semitrailer.

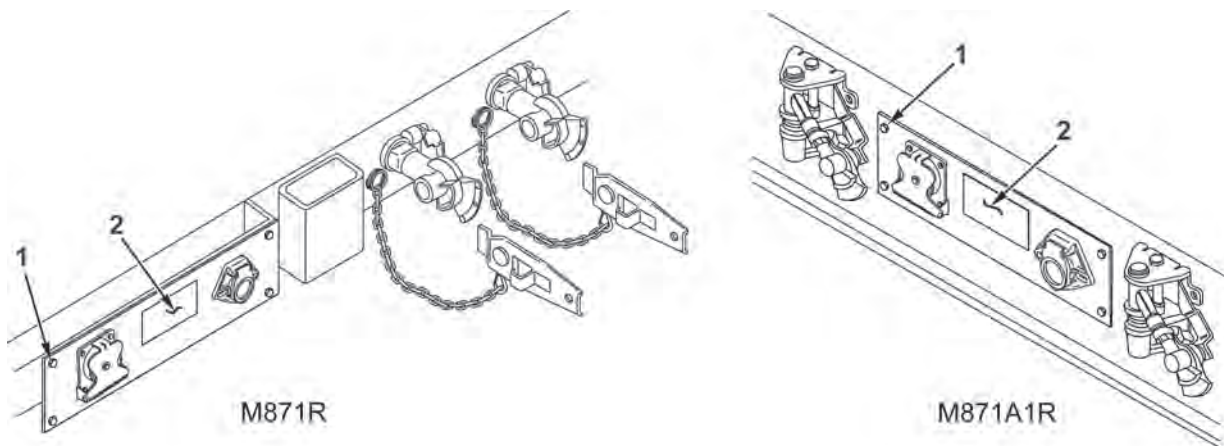


Figure 1. Receptacle Converter Box Removal and Installation.

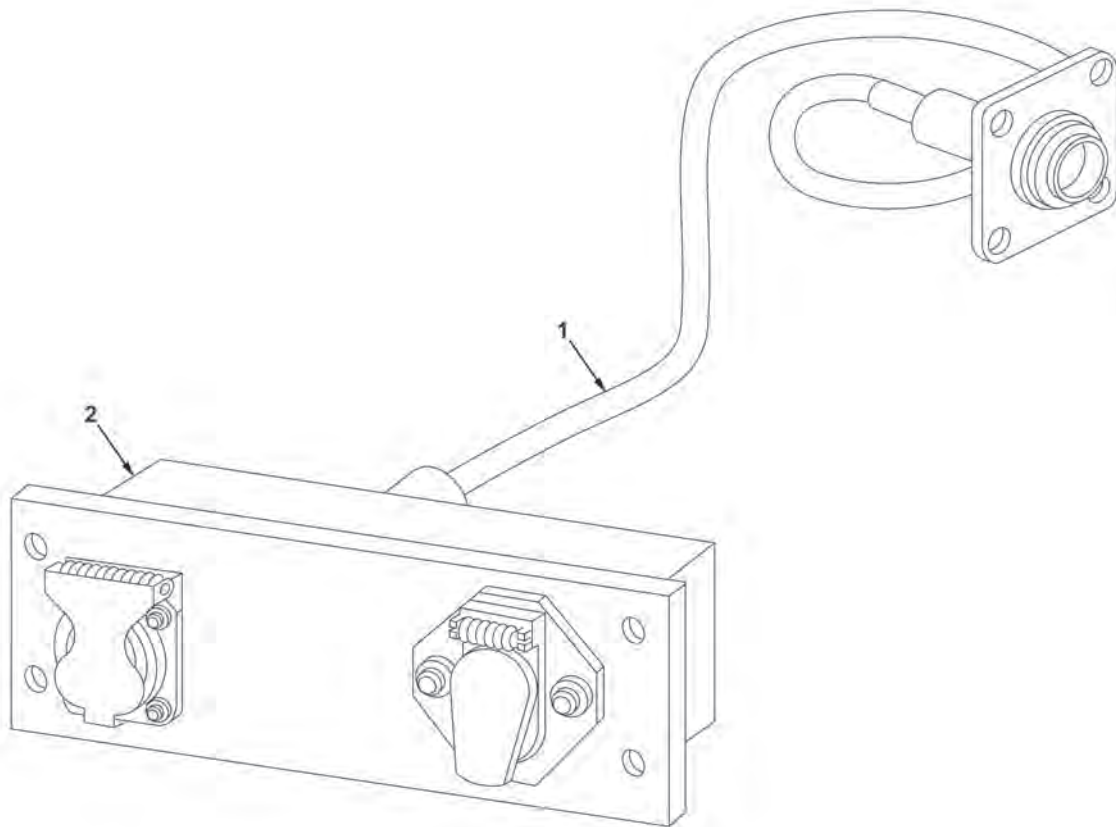
INSTALLATION - Continued

Figure 2. Cable Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect power source and test receptacle converter box for proper operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
RECEPTACLE CONVERTER BOX AND NOSE PLATE REPLACEMENT (M871A2R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Locknut Qty: 4 (WP 0093, Figure 4, Item 4)
Self-Tapping Screw
Qty: 4 (WP 0093, Figure 4, Item 5)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Equipment Condition

Landing legs down (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CAUTION

The semitrailer's converter box and electrical system will be damaged if the 12 volt (7 pin) and 24 volt (12 pin) cables are plugged in at the same time. DO NOT plug both the 12 volt (7 pin) and 24 volt (12 pin) cables in at the same time. Failure to comply may result in equipment damage.

REMOVAL

1. Remove self-tapping screws (Figure 1, Item 6) and pull out nose plate (Figure 1, Item 7) as a unit. Discard self-tapping screws (Figure 1, Item 6).
2. Remove nut (Figure 1, Item 4) and disconnect ground wire (Figure 1, Item 3).
3. Disconnect hoses (Figure 1, Item 5), if required.
4. Disconnect cable (Figure 1, Item 2) from wiring harness (Figure 1, Item 1) and remove nose plate (Figure 1, Item 7) as a unit.

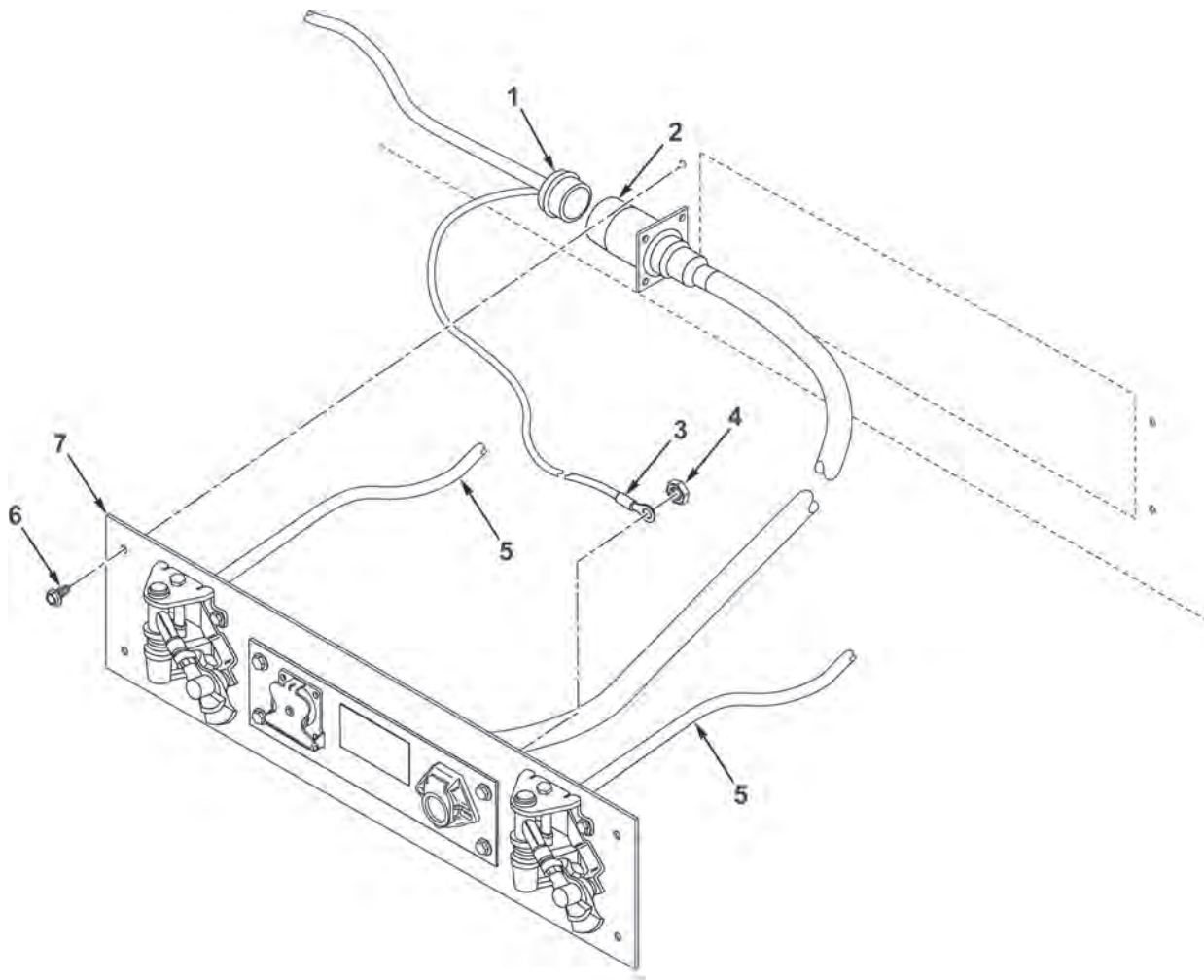


Figure 1. Nose Plate Removal.

REMOVAL - Continued

5. Remove locknuts (Figure 2, Item 4), bolts (Figure 2, Item 2), and receptacle converter box (Figure 2, Item 1) from nose plate (Figure 2, Item 3). Discard locknuts (Figure 2, Item 4).

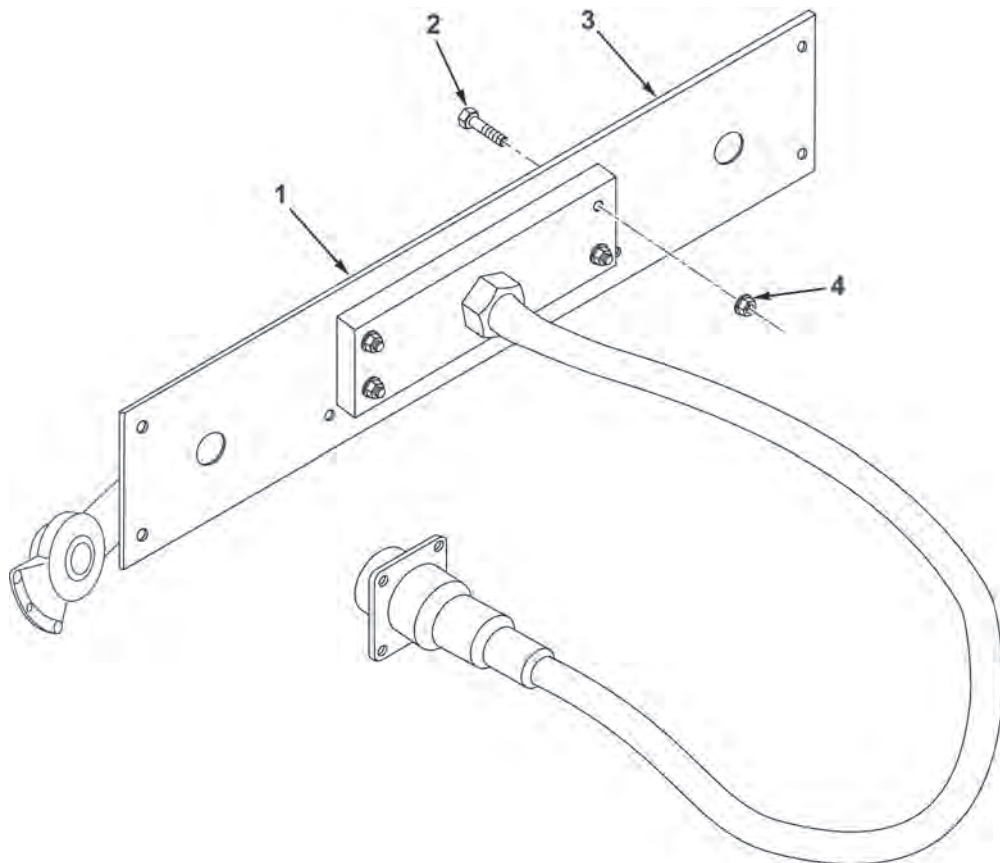


Figure 2. Receptacle Converter Box and Cable Removal.

END OF TASK

INSTALLATION

1. Install receptacle converter box (Figure 3, Item 1), bolts (Figure 3, Item 2), and new locknuts (Figure 3, Item 4) on nose plate (Figure 3, Item 3).

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

2. Apply silicone electric grease to all electrical connector pins.

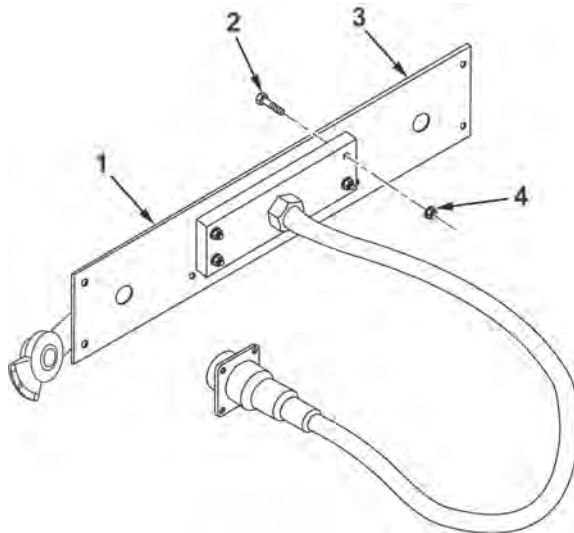


Figure 3. Receptacle Converter Box and Cable Installation.

3. Connect cable (Figure 4, Item 2) to wiring harness (Figure 4, Item 1).
4. Connect hoses (Figure 4, Item 5) if disconnected.
5. Connect ground wire (Figure 4, Item 3) and install nut (Figure 4, Item 4).
6. Install nose plate (Figure 4, Item 7) as a unit and install new self-tapping screws (Figure 4, Item 6).

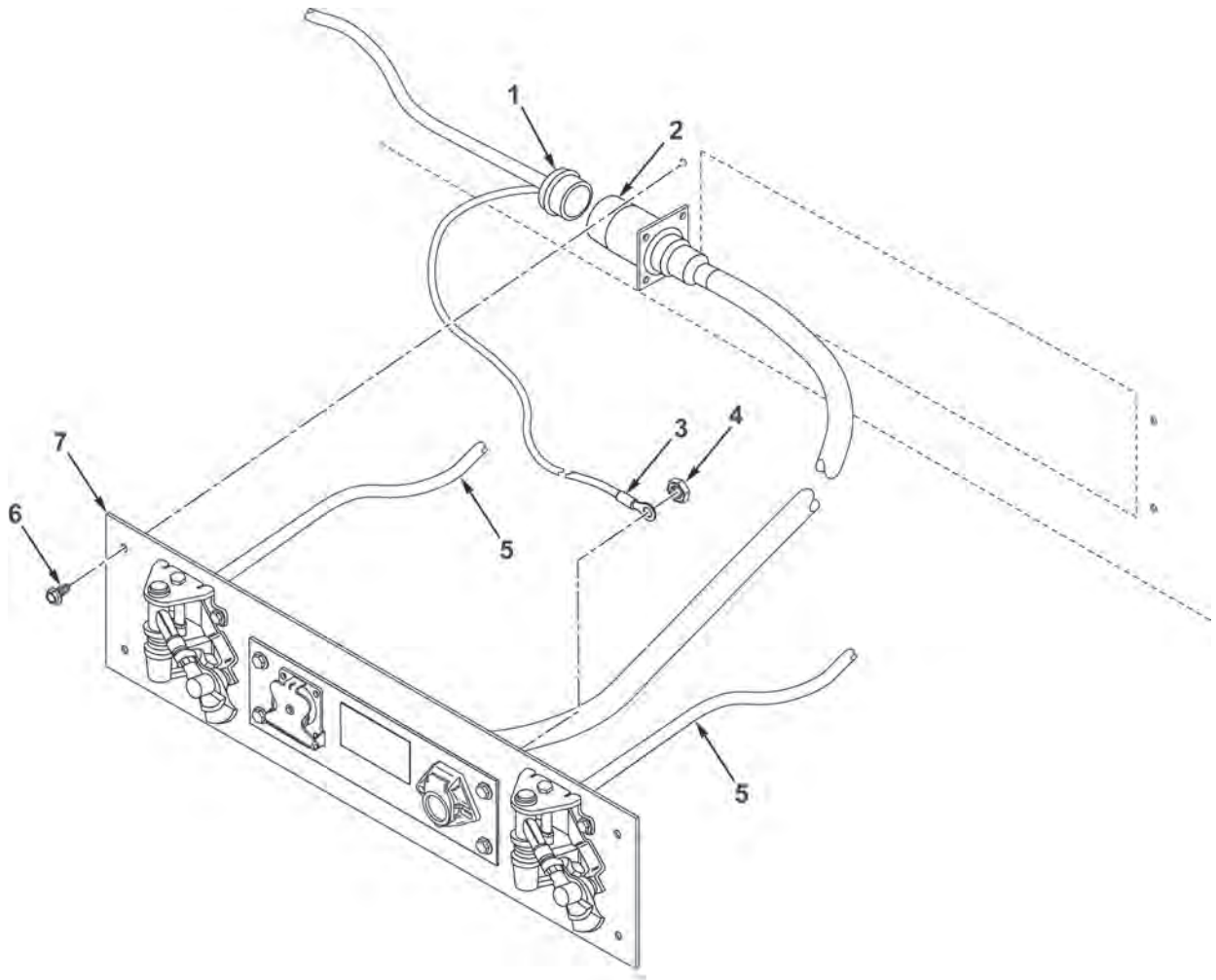
INSTALLATION - Continued

Figure 4. Nose Plate Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Connect power source and test receptacle converter box for proper operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE CHASSIS WIRING HARNESS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Grommet Qty: AR (WP 0094, Figure 5, Item 11)
Grommet Qty: AR (WP 0094, Figure 5, Item 12)
Grommet Qty: AR (WP 0094, Figure 5, Item 13)

Equipment Condition

Landing legs down (WP 0005)

WARNING



Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CAUTION

Use silicone electric grease on all electrical connections and grounds to prevent corrosion. Failure to comply may result in equipment damage.

NOTE

- Refer to Figure 2 for electrical schematic.
- Refer to Figure 3 for module electrical diagram.

REMOVAL

1. Remove two wiring harnesses (Figure 1, Item 1) from taillights, side clearance lights, and rear wiring harness (Figure 1, Item 11).
2. Remove wiring harness (Figure 1, Item 13) from two Blackout (BO) lights and BO socket wiring harness (Figure 1, Item 2).
3. Remove wiring harness (Figure 1, Item 12) from rear clearance lights and rear wiring harness (Figure 1, Item 11).
4. Remove Antilock Brake System (ABS) main wiring harness (Figure 1, Item 10) from ABS warning light, rear wiring harness (Figure 1, Item 11), and main wiring harness (Figure 1, Item 9).
5. Remove side clearance light wiring harness (Figure 1, Item 3) from two clearance lights and main wiring harnesses (Figure 1, Item 9).
6. Remove two PL10 wiring harnesses (Figure 1, Item 5) from front clearance lights and two PL10 marker wiring harnesses (Figure 1, Item 4).
7. Remove two PL10 marker wiring harnesses (Figure 1, Item 4) from BO socket wiring harness (Figure 1, Item 2).
8. Remove BO socket wiring harness (Figure 1, Item 2), main wiring harness (Figure 1, Item 9), and ABS wiring harness (Figure 1, Item 10).
9. Remove damaged grommets (Figure 1, Items 6, 7, and 8), as necessary, and discard.

END OF TASK**INSTALLATION****WARNING**

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

NOTE

Use silicone electric grease on all pins.

1. Replace damaged grommets with new grommets (Figure 1, Items 6, 7, and 8) as necessary.
2. Install BO socket wiring harness (Figure 1, Item 2) and main wiring harness (Figure 1, Item 9).
3. Install two PL10 marker wiring harnesses (Figure 1, Item 4) to BO socket wiring harness (Figure 1, Item 2).
4. Install two PL10 wiring harnesses (Figure 1, Item 5) to front clearance lights and PL10 marker wiring harnesses (Figure 1, Item 4). Connect two PL10 marker wiring harnesses (Figure 1, Item 4) to BO socket wiring harness (Figure 1, Item 2).
5. Install ABS main wiring harness (Figure 1, Item 10) to ABS warning light, rear wiring harness (Figure 1, Item 11), and main wiring harness (Figure 1, Item 9). Connect main wiring harness (Figure 1, Item 9) to BO socket wiring harness (Figure 1, Item 2).

INSTALLATION - Continued

6. Install side clearance light wiring harness (Figure 1, Item 3) to two clearance lights and main wiring harness (Figure 1, Item 9).
7. Install wiring harness (Figure 1, Item 12) to rear clearance lights and rear wiring harness (Figure 1, Item 11).
8. Install wiring harness (Figure 1, Item 13) to two BO light and BO socket wiring harness (Figure 1, Item 2).
9. Install two wiring harnesses (Figure 1, Item 1) to taillights, side clearance lights, and rear wiring harness (Figure 1, Item 11).

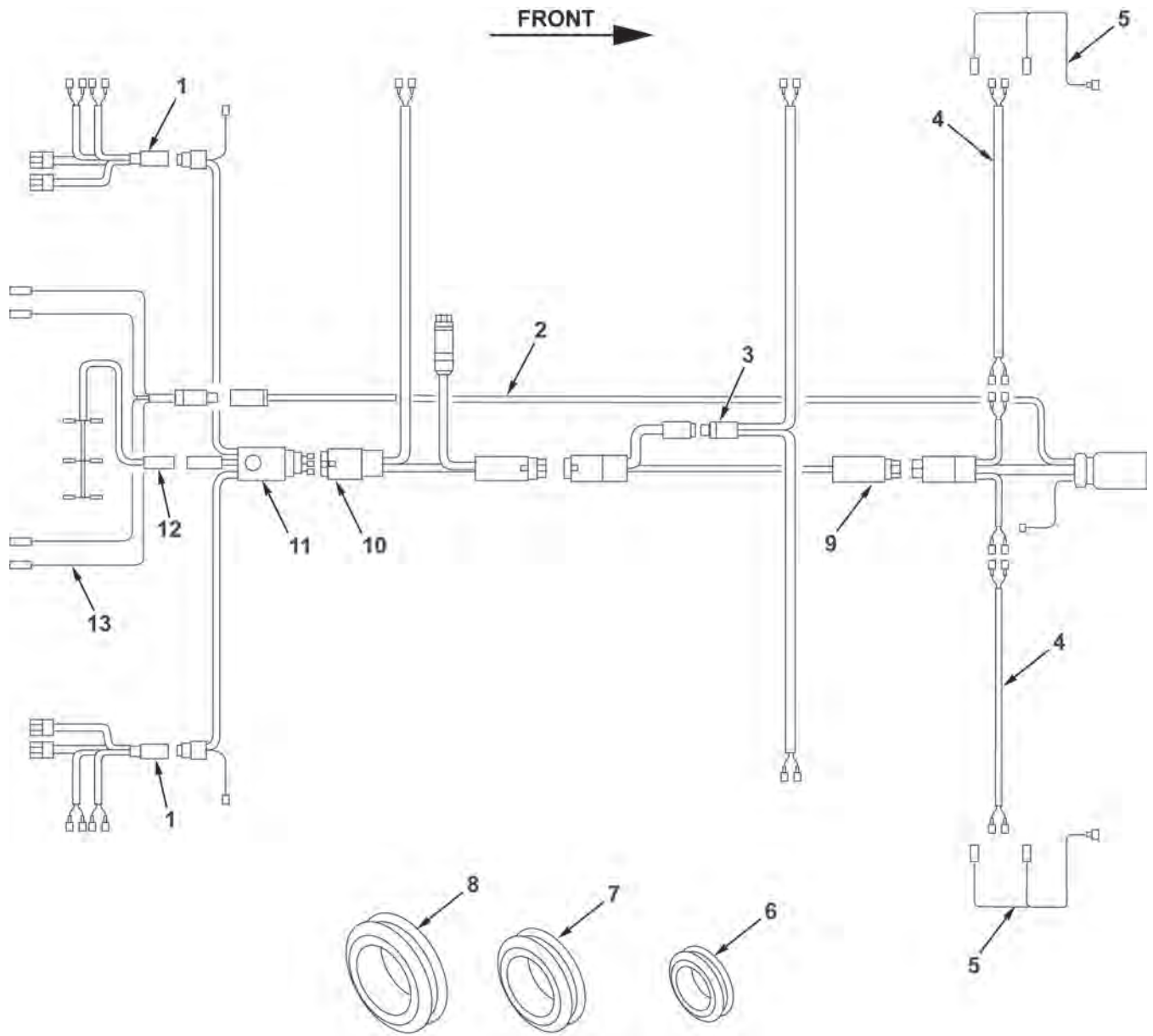


Figure 1. Wiring Harnesses Removal and Installation.

INSTALLATION - Continued

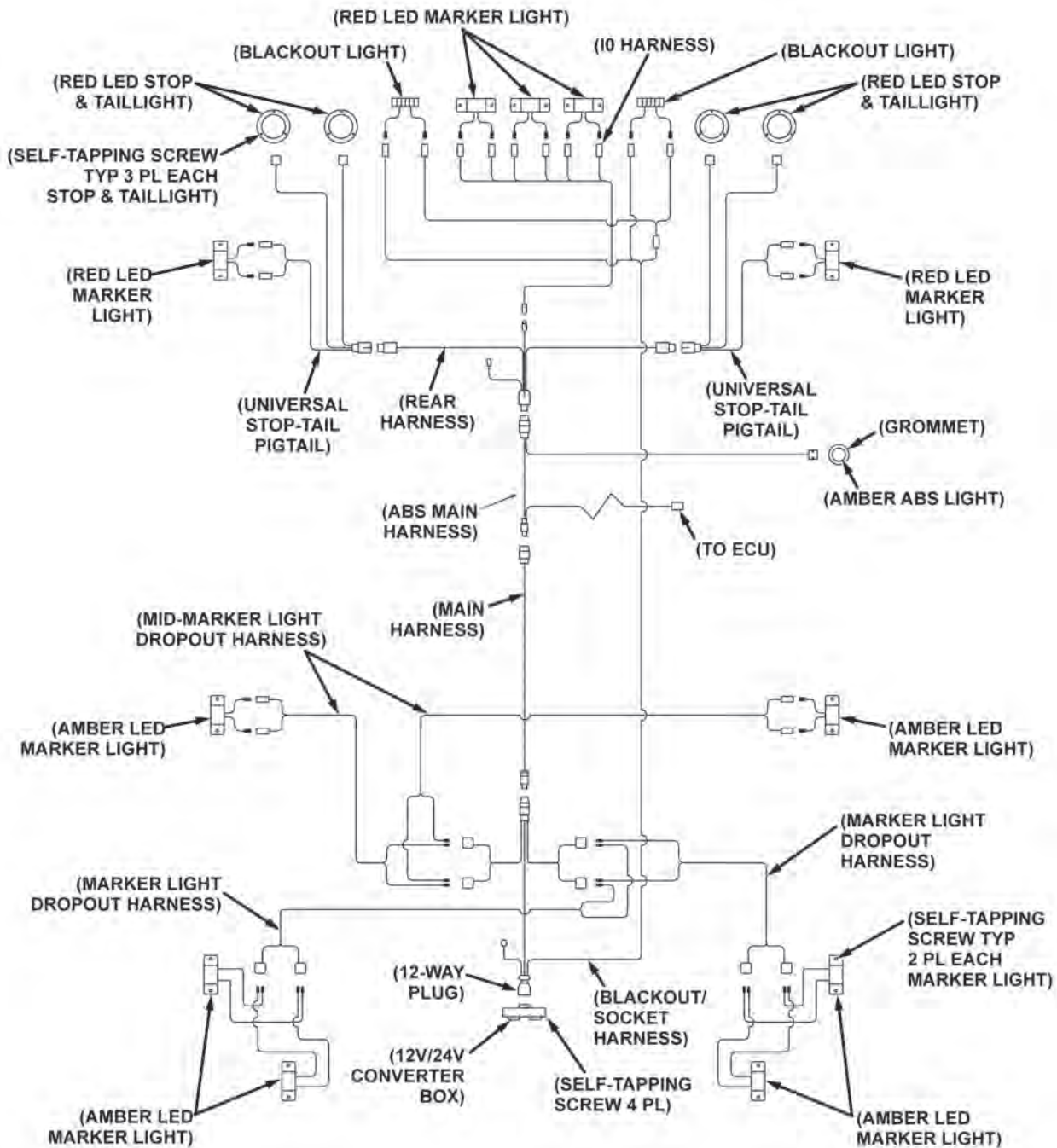


Figure 2. Electrical Schematic.

INSTALLATION - Continued

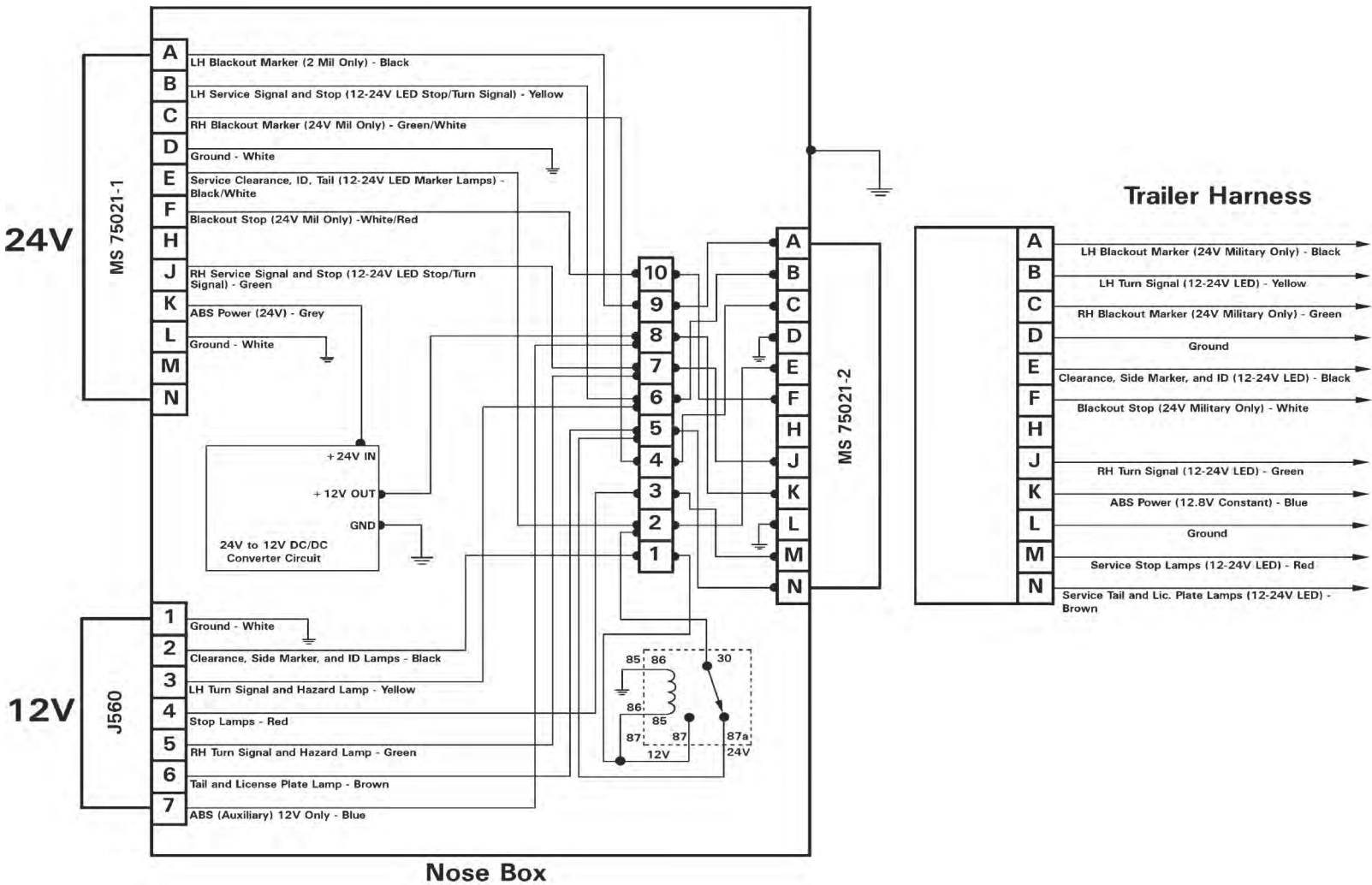


Figure 3. Module Electrical Diagram.

END OF TASK

0035-5

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Ensure lighting system is operational.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
WIRE CONNECTORS MAINTENANCE

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Wire Crimpers (WP 0138, Table 1, Item 30)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Grease Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)

Equipment Condition

Landing legs down (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

If necessary, slide marker bands away from the connector.

MALE CONNECTOR REPAIR

1. Slide shell (Figure 1, Item 3) up wire lead (Figure 1, Item 2) until clear of contact (Figure 1, Item 4) and slotted washer (Figure 1, Item 1).
2. Remove slotted washer (Figure 1, Item 1).
3. Slide shell (Figure 1, Item 3) off over contact (Figure 1, Item 4).

NOTE

If replacing shell only, skip Steps 4, 5, and 7.

4. Cut wire lead (Figure 1, Item 2) as close as possible to contact (Figure 1, Item 4).
5. Strip insulation from wire lead (Figure 1, Item 2) equal to depth of new contact (Figure 1, Item 4).
6. Slide new shell (Figure 1, Item 3) onto wire lead (Figure 1, Item 2).

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

7. Slide wire lead (Figure 1, Item 2) end into new contact (Figure 1, Item 4). Crimp contact (Figure 1, Item 4) to wire lead (Figure 1, Item 2). Apply silicone electric grease to wire lead (Figure 1, Item 2).
8. Place slotted washer (Figure 1, Item 1) onto wire lead (Figure 1, Item 2) at contact (Figure 1, Item 4).
9. Slide shell (Figure 1, Item 3) down wire lead (Figure 1, Item 2) until slotted washer (Figure 1, Item 1) is seated.

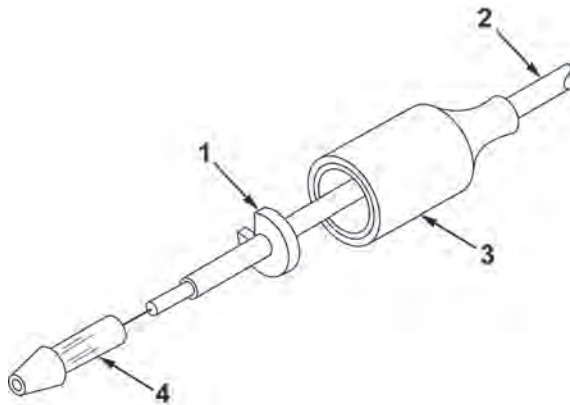


Figure 1. Male Connector Repair.

10. Apply silicone electric grease to outside of female connector shell. Push connector halves together until seated.

FEMALE CONNECTOR REPAIR

1. Slide shell (Figure 2, Item 2) and insulator (Figure 2, Item 1) up wire lead (Figure 2, Item 3) until clear of terminal (Figure 2, Item 4).
2. Cut wire lead (Figure 2, Item 3) as close as possible to terminal (Figure 2, Item 4).
3. Slide insulator (Figure 2, Item 1) and shell (Figure 2, Item 2) off wire lead (Figure 2, Item 3).
4. Strip insulation from wire lead (Figure 2, Item 3) 0.125 in. (0.32 cm) from end.
5. Slide shell (Figure 2, Item 2) and insulator (Figure 2, Item 1) onto wire lead (Figure 2, Item 3).

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

6. Slide wire lead (Figure 2, Item 3) end into terminal (Figure 2, Item 4). Crimp terminal (Figure 2, Item 4) to wire lead (Figure 2, Item 3). Apply silicone electric grease to end of wire lead (Figure 2, Item 3).
7. Slide insulator (Figure 2, Item 1) and shell (Figure 2, Item 2) over terminal (Figure 2, Item 4) until seated.
8. Apply silicone electric grease to outside of female connector shell (Figure 2, Item 2). Push connector halves together until seated.

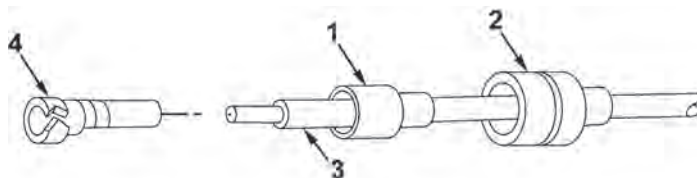


Figure 2. Female Connector Repair.

TERMINAL REPLACEMENT**NOTE**

This procedure is typical for ring-type and quick-disconnect terminals. Procedure shown is for ring (grounding) terminal.

1. Cut wire lead (Figure 3, Item 2) as close as possible to terminal (Figure 3, Item 1). Discard terminal (Figure 3, Item 1).
2. Strip insulation from wire lead (Figure 3, Item 2) equal to depth of new terminal (Figure 3, Item 1).
3. Slide wire lead (Figure 3, Item 2) end into new terminal (Figure 3, Item 1). Crimp terminal (Figure 3, Item 1) to wire lead (Figure 3, Item 2).
4. Connect terminal (Figure 3, Item 1).

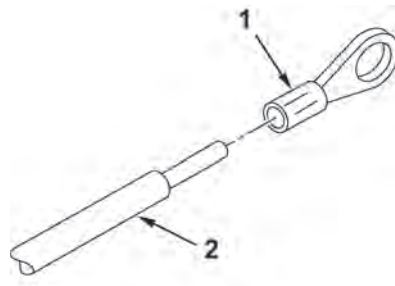


Figure 3. Terminal Replacement.

CIRCUIT MARKER BAND REPLACEMENT

1. Use a flat-tip screwdriver to open tab ends (Figure 4, Item 1) on marker band (Figure 4, Item 2). Remove marker band (Figure 4, Item 2) from wire lead (Figure 4, Item 3), note circuit number, and discard marker band (Figure 4, Item 2).
2. Mark number onto new marker band (Figure 4, Item 2).
3. Place new circuit marker band (Figure 4, Item 2) onto wire lead (Figure 4, Item 3). Bend tab ends (Figure 4, Item 1) over wire lead (Figure 4, Item 3).

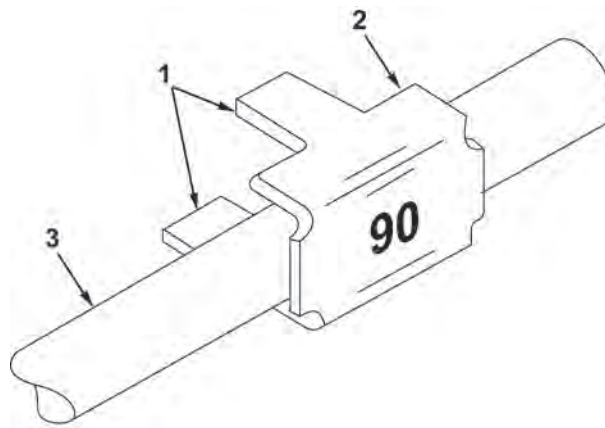
CIRCUIT MARKER BAND REPLACEMENT - Continued

Figure 4. Circuit Marker Band Replacement.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Test connectors for proper operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE AXLE MAINTENANCE

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Shop Equipment, Welding
(WP 0138, Table 1, Item 18)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Locknut Qty: 8 (WP 0114, Figure 25, Item 35)
Locknut Qty: 8 (WP 0114, Figure 25, Item 42)

Personnel Required

(4)

References

WP 0024

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Tires and wheels removed (WP 0026)
Brake chamber air hose assemblies removed
(WP 0043)
Air brake chambers removed (WP 0044)
Slack adjusters removed (WP 0040)
Brake drums and hubs removed (WP 0050)
Brake shoes removed (WP 0039)

WARNING



- Axle weighs 200 lb (91 kg). Use four personnel to lift axle. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The axle must be firmly supported with suitable support devices before performing Steps 2, 3, and 4. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

AXLE REMOVAL

1. Place floor jacks into position to support axle (Figure 1, Item 9) and jack stands to support trailer frame.
2. Remove four locknuts (Figure 1, Item 7), washers (Figure 1, Item 8), and capscrews (Figure 1, Item 1) evenly from end cap (Figure 1, Item 4). Discard locknuts (Figure 1, Item 7).
3. Remove four locknuts (Figure 1, Item 2) evenly. Remove eight washers (Figure 1, Item 3) and two U-bolts (Figure 1, Item 6). Discard locknuts (Figure 1, Item 2).
4. Remove end cap (Figure 1, Item 4) and two pads (Figure 1, Item 5) from spring (Figure 1, Item 10).
5. Repeat Steps 2 through 4 for other side of axle (Figure 1, Item 9).
6. Slowly lower and remove axle (Figure 1, Item 9).

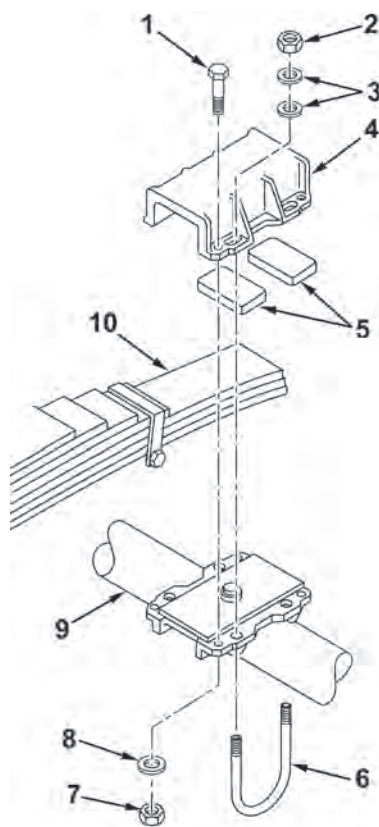


Figure 1. Axle Removal.

END OF TASK

AXLE REPAIR

Repair of axle is limited to chasing spindle threads.

END OF TASK

SPRING SEAT (FOR NEW AXLE ONLY) INSTALLATION**NOTE**

- This procedure is to be used only when a new axle is being installed. If old axle is being installed, refer to AXLE INSTALLATION.
 - When ordering new axle, you must also order the lower alignment plates and spring seats. Two sets (alignment plate and lower spring seat) are required per axle.
 - If installing two new axles, preweld two alignment plates and spring seats, and install on the springs at opposite corners (for example, left-rear and right-front).
1. Install two pads (Figure 2, Item 5) with rounded edges on spring (Figure 2, Item 11). Install end cap (Figure 2, Item 4).
 2. Place axle (Figure 2, Item 7) in position under suspension. Ensure spring seats (Figure 2, Item 6) are equal distance from axle (Figure 2, Item 7) beam center hole. Spring seats (Figure 2, Item 6) should also be same distance from brake spiders.
 3. Install four capscrews (Figure 2, Item 1), washers (Figure 2, Item 10), and new locknuts (Figure 2, Item 9). DO NOT tighten locknuts (Figure 2, Item 9).
 4. Arrange spring seats (Figure 2, Item 6) so that center of seat is at top of axle (Figure 2, Item 7) beam. Exact top of axle (Figure 2, Item 7) beam is indicated by 0.31 in. (0.79 cm) die hole at top center of axle (Figure 2, Item 7).
 5. Install two U-bolts (Figure 2, Item 8), eight washers (Figure 2, Item 3), and four new locknuts (Figure 2, Item 2). DO NOT tighten locknuts (Figure 2, Item 2).

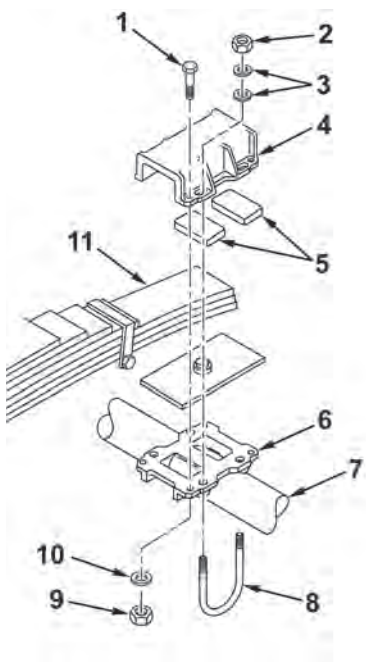


Figure 2. Spring Seat Installation.

SPRING SEAT (FOR NEW AXLE ONLY) INSTALLATION - Continued

6. Ensure that both spring seats (Figure 3, Item 1) are parallel with each other.
7. Ensure that both spring seats (Figure 3, Item 1) fit tight to axle (Figure 3, Item 2) beam.

WARNING

Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

CAUTION

DO NOT attach welding ground clamps to U-bolts, springs, or axles except at designated weld points. These parts should be protected from weld spatter. Failure to comply may result in equipment damage.

8. Tack weld spring seats (Figure 3, Item 1) in place. Recheck to ensure that spring seats (Figure 3, Item 1) are still level, parallel, properly located, and aligned. Lower axle (Figure 3, Item 2).
9. Weld spring seats (Figure 3, Item 1) to axle (Figure 3, Item 2) using 0.375 in. (0.952 cm) fillet welds.
10. Disassemble and complete axle (Figure 3, Item 2) installation and alignment tasks.

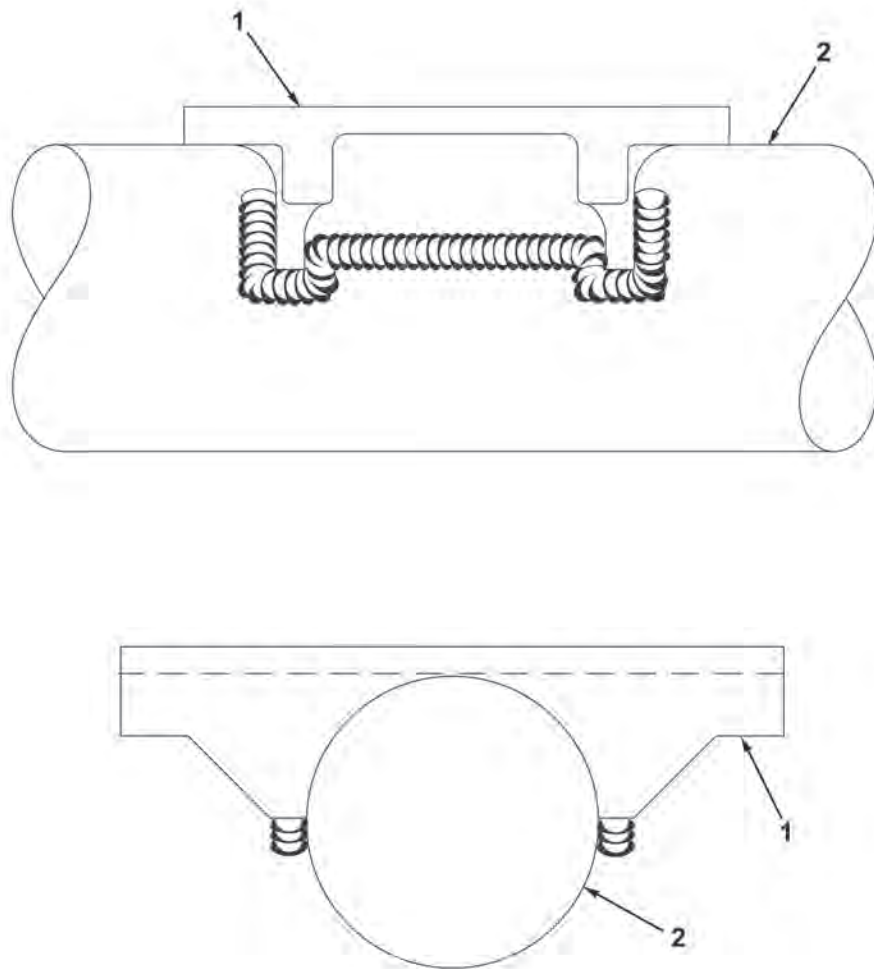
SPRING SEAT (FOR NEW AXLE ONLY) INSTALLATION - Continued

Figure 3. Weld Points.

END OF TASK

AXLE INSTALLATION**NOTE**

If installing new axle, refer to SPRING SEAT INSTALLATION.

1. Support trailer frame with jack stands.
2. If necessary, install brake camshafts (WP 0044).

WARNING

For proper operation of air brakes, both axles must be positioned with air brake chambers to the rear of semitrailer and slack adjusters to the front. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

3. Position axle (Figure 4, Item 12) under spring (Figure 4, Item 13) with brake chambers toward rear of semitrailer. Using floor jacks, raise axle (Figure 4, Item 12) into position.
4. On both sides of axle (Figure 4, Item 12), align raised surface of alignment plate (Figure 4, Item 7), which is welded to spring seat (Figure 4, Item 11) unless axle (Figure 4, Item 12) is new with recess (Figure 4, Item 6) on underside of spring (Figure 4, Item 13) assembly.
5. Install two pads (Figure 4, Item 5) with rounded edges on spring (Figure 4, Item 13). Install end cap (Figure 4, Item 4).
6. Install two U-bolts (Figure 4, Item 8), eight washers (Figure 4, Item 3), and four new locknuts (Figure 4, Item 2). DO NOT tighten locknuts (Figure 4, Item 2).
7. Install four capscrews (Figure 4, Item 1), washers (Figure 4, Item 10), and new locknuts (Figure 4, Item 9). DO NOT tighten locknuts (Figure 4, Item 9).
8. Repeat Steps 3 through 7 above for other side of axle (Figure 4, Item 12).

NOTE

If installing new axle, refer to AXLE ALIGNMENT.

9. Torque U-bolt locknuts (Figure 4, Item 2) to 300 lb-ft (407 N•m) Dry, if Wet, 220 lb-ft (298 N•m).
10. Torque end cap locknuts (Figure 4, Item 9) to 180 lb-ft (244 N•m) Dry, if Wet, 130 lb-ft (176 N•m)
11. Repeat Steps 9 and 10 above for other side of axle (Figure 4, Item 12).
12. Close drain valves (WP 0024).
13. Remove axle (Figure 4, Item 12) and frame supports.
14. Perform final AXLE ALIGNMENT check.

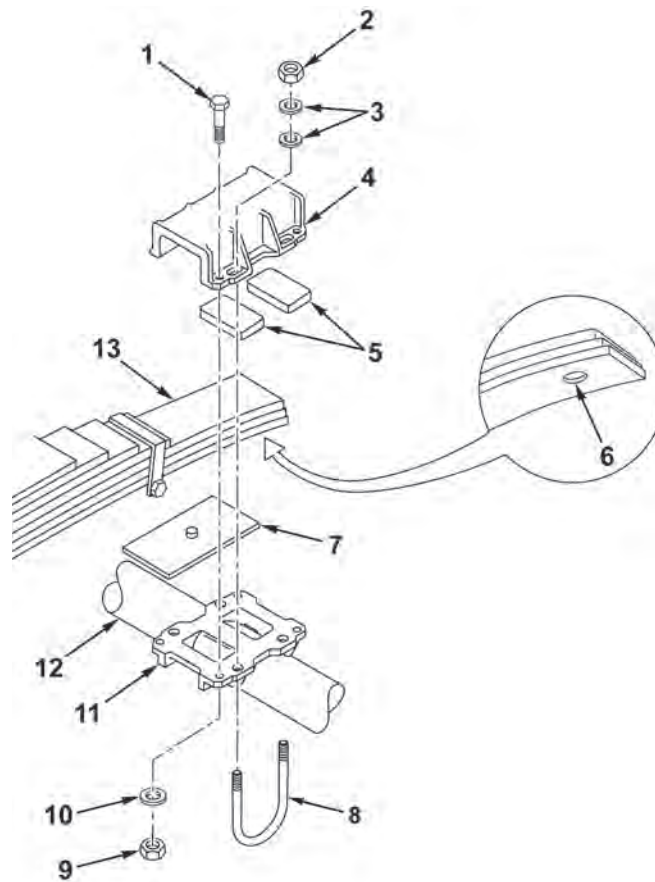
AXLE INSTALLATION - Continued

Figure 4. Axle Installation.

END OF TASK

AXLE ALIGNMENT

After the suspension has been installed under the semitrailer, align axles in relation to the semitrailer kingpin as follows:

1. Align front axle with semitrailer kingpin by measuring distance from kingpin to centerline of spindles on front axle. Dimensions A and B (Figure 5) must be equal within 0.13 in. (3.30 mm).
2. Tighten U-bolts and end clamp bolts to specification on that axle only.
3. Align rear axle with front axle. Dimensions C and D (Figure 5) must be equal within 0.06 in. (1.52 mm).
4. Tighten U-bolts and end clamp bolts on rear axle.
5. Check dimension E (Figure 5), the lateral centerline relationship of semitrailer body and axles. Dimension E (Figure 5) must not exceed 0.25 in. (6.35 mm).
6. Recheck alignment of front axle with kingpin and rear axle with front axle until all are aligned.

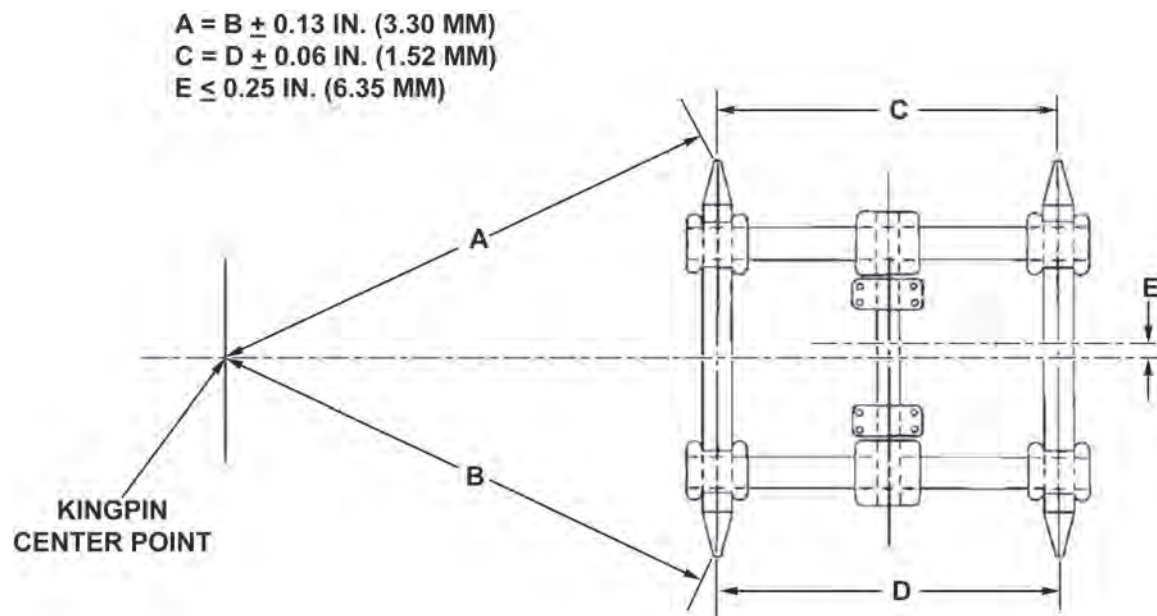


Figure 5. Axle Alignment.

CAUTION

Check all fasteners (U-bolts, end cap, trunnion hub, etc.) to ensure they are tightened to specification. Torque for all fasteners should be checked after an initial break-in period and periodically thereafter. Failure to comply may result in equipment damage.

7. Tighten U-bolts and nuts to specification.

AXLE ALIGNMENT - Continued**WARNING**

- Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Adjustment plates **MUST BE WELDED BEFORE** operating the semitrailer. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
8. Weld the unwelded adjustment plates (Figure 6) to spring seats.

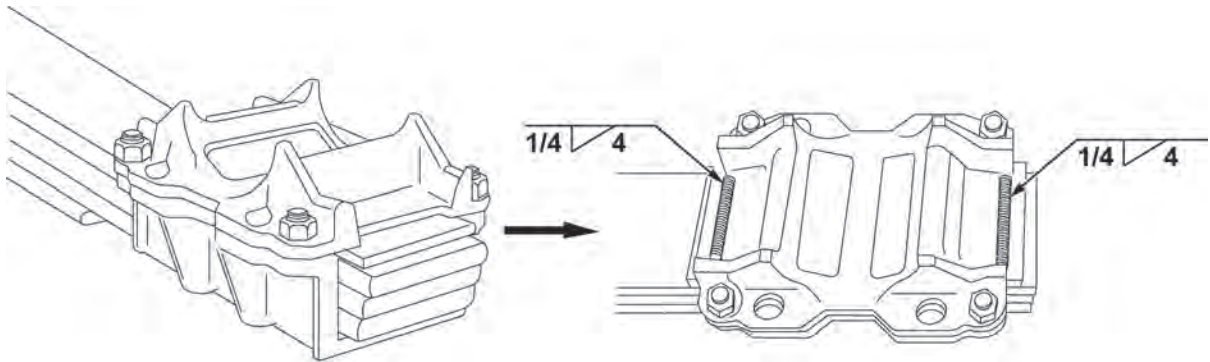


Figure 6. Adjustment Plate Welding.

END OF TASK

FOLLOW-ON TASKS

1. Install brake shoes (WP 0039).
2. Install brake drums and hubs (WP 0050).
3. Install slack adjusters (WP 0040).
4. Install air brake chambers (WP 0044).
5. Install brake chamber air hose assemblies (WP 0043).
6. Install tires and wheels (WP 0026).
7. Connect semitrailer to prime mover (WP 0005).
8. Raise landing legs (WP 0005).
9. Remove and store chock blocks and ground boards (WP 0005).
10. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE SERVICE BRAKES – S-CAMSHAFT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Retaining Ring Pliers
(WP 0138, Table 1, Item 16)

Materials/Parts

Grease Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Lockwasher Qty: 4 (WP 0096, Figure 7, Item 15)
O-ring Qty: 2 (WP 0096, Figure 7, Item 9)
Retaining Ring (WP 0096, Figure 7, Item 19)

References

WP 0085

Equipment Condition

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Axles supported by jack stands
Tires and wheels removed (WP 0026)
Brake drum removed (WP 0050)
Brake shoes removed (WP 0039)

Personnel Required

(2)

WARNING



- All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Clean and check all S-camshaft brake components for wear and damage. Replace worn or damaged parts. At triennial service, replace all O-rings, bushings, retainers, snap rings, lockwashers, and brackets on each axle end. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

NOTE

- There are four brake S-camshafts (two left and two right), and they are removed and installed the same way. "Right" and "left" does not mean left and/or right side. Left or right S-camshaft is specific to S-camshaft rotation in operation. These procedures cover one brake S-camshaft.
- S-camshafts and related parts are to be lubricated in accordance with WP 0085.

REMOVAL

1. Remove snap ring (Figure 1, Item 7) and retaining ring (Figure 1, Item 8) from S-camshaft (Figure 1, Item 1). Discard retaining ring (Figure 1, Item 8).
2. Remove S-camshaft (Figure 1, Item 1), washer (Figure 1, Item 2), two washers (Figure 1, Item 3), washer (Figure 1, Item 6), spacer (Figure 1, Item 10), and washer (Figure 1, Item 9) from bushing retainer (Figure 1, Item 4).
3. Remove four screws (Figure 1, Item 5) and bushing retainer (Figure 1, Item 4).
4. Remove four screws (Figure 1, Item 11), lockwashers (Figure 1, Item 12), washers (Figure 1, Item 13), bushing retainer (Figure 1, Item 15), bushing (Figure 1, Item 18), two O-rings (Figure 1, Item 17), and bushing retainer (Figure 1, Item 19). Discard lockwashers (Figure 1, Item 12) and O-rings (Figure 1, Item 17). Check for worn bushings.
5. Remove lubrication fitting (Figure 1, Item 14) from bushing retainer (Figure 1, Item 15).

END OF TASK**INSTALLATION**

1. Install lubrication fitting (Figure 1, Item 14) on bushing retainer (Figure 1, Item 15).
2. Install bushing retainer (Figure 1, Item 19), bushing (Figure 1, Item 18), two new O-rings (Figure 1, Item 17), and bushing retainer (Figure 1, Item 15) onto S-camshaft bushing mounting bracket (Figure 1, Item 16) with four new lockwashers (Figure 1, Item 12), washers (Figure 1, Item 13), and screws (Figure 1, Item 11).
3. Install bushing retainer (Figure 1, Item 4) and four screws (Figure 1, Item 5).

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

4. Lightly lubricate S-camshaft (Figure 1, Item 1) lobes with silicone grease. Wipe off excess silicone grease.
5. Install S-camshaft (Figure 1, Item 1) with washer (Figure 1, Item 2), two washers (Figure 1, Item 3), washer (Figure 1, Item 6), spacer (Figure 1, Item 10), and washer (Figure 1, Item 9).
6. Install S-camshaft (Figure 1, Item 1), snap ring (Figure 1, Item 7), and new retaining ring (Figure 1, Item 8).

INSTALLATION - Continued

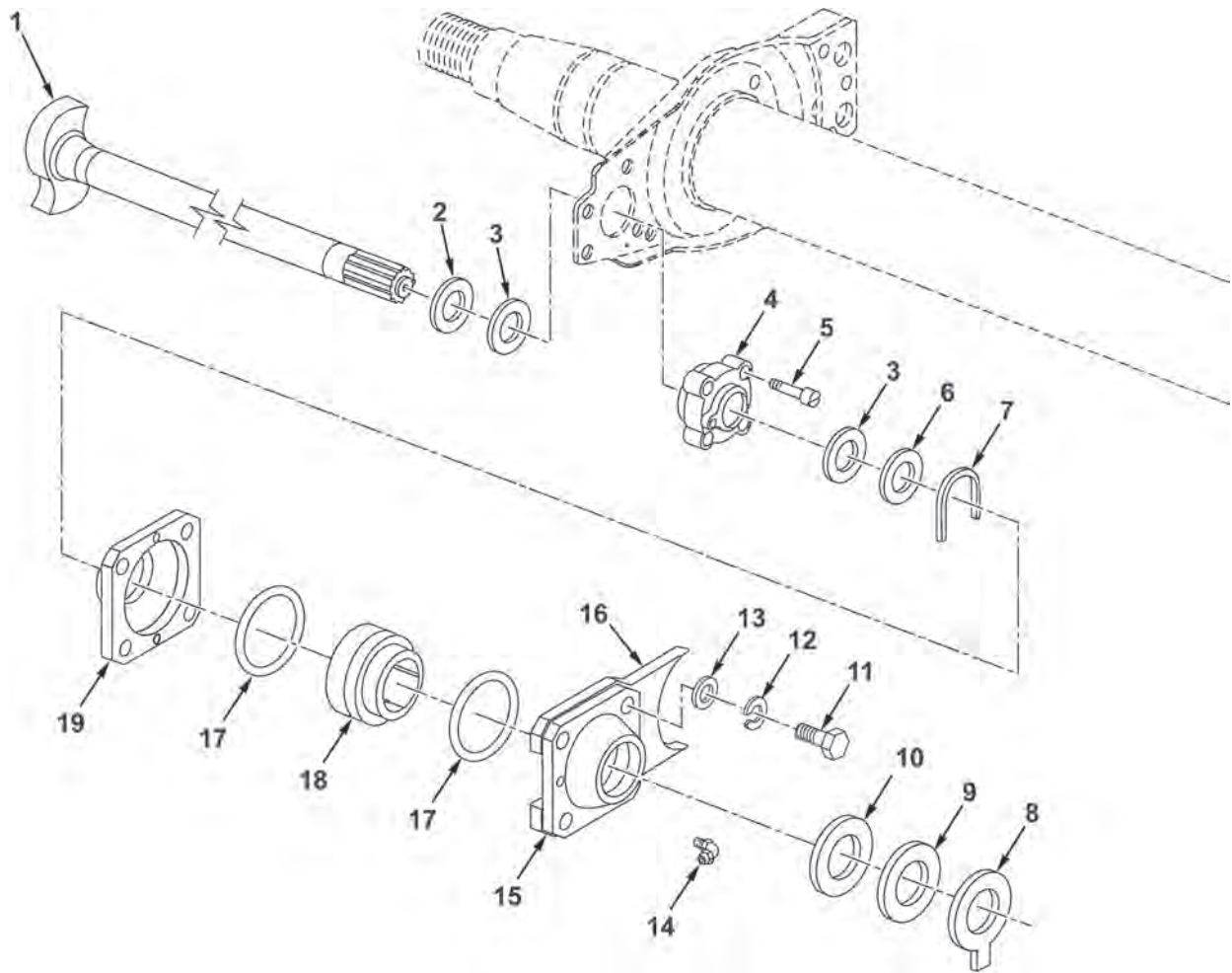


Figure 1. Service Brakes – S-Camshaft Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Lubricate retainer bushing with lubrication fittings (WP 0085).
2. Install brake shoes (WP 0039).
3. Install brake drum (WP 0050).
4. Install tire and wheel (WP 0026).
5. Remove jack stands from axles.
6. Remove chock blocks (WP 0005).
7. Connect semitrailer to prime mover (WP 0005).
8. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

SERVICE BRAKES – SHOES AND DUST SHIELD REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Bushing Driver Set, 1/2 to 3 in.
(WP 0138, Table 1, Item 3)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)

Equipment Condition (cont.)

Wheels chocked (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Semitrailer rear supported by jack stands
Tires and wheels removed (WP 0026)
Brake drum removed (WP 0050)
Ground boards emplaced (WP 0005)

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)
Brake Shoe Kit (WP 0097, Figure 8, Item 1)
Rag, Wiping (WP 0137, Table 1, Item 36)

References

WP 0040
WP 0085

Equipment Condition

Landing legs down (WP 0005)

WARNING



- Clean and check service brakes and all brake components for wear and damage. Replace worn or damaged parts. At triennial service, replace all springs, pins, rollers, clips, and bushings on each axle end. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

CAUTION

DO NOT allow lining surfaces to become contaminated with any lubrication. Failure to comply may result in equipment damage.

NOTE

- There are four brake shoe assemblies, and they are removed and installed the same way. These procedures cover one brake shoe assembly.
- Balance repairs on both axle ends.

REMOVAL**WARNING**

Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

If installing new brake shoes and linings, discard old return springs, retainer springs, return spring holding pins, brake shoe rollers, anchor pins and bushings, and roller retainers; replace with new.

1. Support axle on both sides with jack stands.
2. Push S-camshaft end of lower shoe and lining (Figure 1, Item 7) down. Pull lower roller retainer (Figure 1, Item 5) to remove roller (Figure 1, Item 6) and lower roller retainer (Figure 1, Item 5).
3. Lift S-camshaft end of upper shoe and lining (Figure 1, Item 1). Pull upper roller retainer (Figure 1, Item 3) to remove top roller (Figure 1, Item 2) and upper roller retainer (Figure 1, Item 3).
4. Lift free end of lower shoe and lining (Figure 1, Item 7), and remove return spring (Figure 1, Item 4).
5. Swing free end of lower shoe and lining (Figure 1, Item 7) away from S-camshaft (Figure 1, Item 9) to release tension on two retaining springs (Figure 1, Item 8).
6. Remove two retaining springs (Figure 1, Item 8) and upper and lower shoes and linings (Figure 1, Items 1 and 7).
7. Remove two anchor pins (Figure 1, Item 10).
8. Use hammer and suitable driver to remove two bushings (Figure 1, Item 11) from spider (Figure 1, Item 12).

REMOVAL - Continued

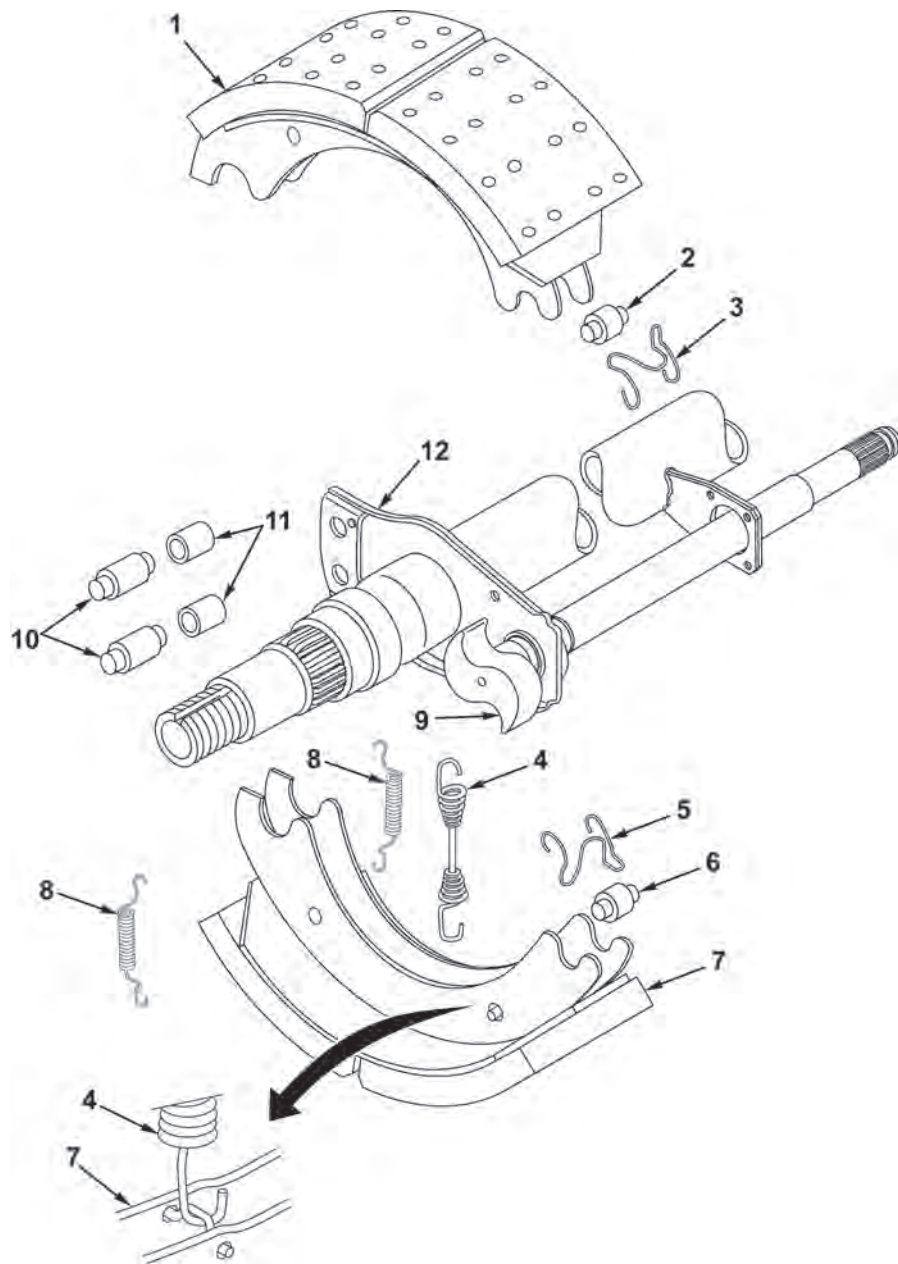


Figure 1. Service Brakes – Shoes and Linings Removal.

END OF TASK

INSTALLATION

NOTE

Install new return springs, retainer springs, return spring holding pins, brake shoe rollers, anchor pins and bushings, and roller retainers at each brake shoe and lining replacement.

1. Drive two bushings (Figure 2, Item 12) into spider (Figure 2, Item 13).

WARNING



- Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
 - DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
2. Apply light coating of antiseize compound to two anchor pins (Figure 2, Item 11), and install anchor pins into two bushings (Figure 2, Item 12) (WP 0085).
 3. Install two return spring holding pins (Figure 2, Item 8) into upper and lower brake shoes and linings (Figure 2, Items 1 and 7).
 4. Place upper brake shoe and lining (Figure 2, Item 1) in position on top anchor pin (Figure 2, Item 11).
 5. Hold lower brake shoe and lining (Figure 2, Item 7) against bottom anchor pin (Figure 2, Item 11) and install two retainer springs (Figure 2, Item 9).
 6. Swing free end of lower brake shoe and lining (Figure 2, Item 7) to S-camshaft (Figure 2, Item 10), pull lower brake shoe and lining (Figure 2, Item 7) up, and install return spring (Figure 2, Item 4) on both brake shoe and lining holding pins (Figure 2, Item 8).
 7. Install lower roller retainer (Figure 2, Item 5) on bottom roller (Figure 2, Item 6).
 8. Install S-camshaft end of lower brake shoe and lining (Figure 2, Item 7) down.
 9. Squeeze sides of lower roller retainer (Figure 2, Item 5) together so it fits between lower brake shoe and lining (Figure 2, Item 7) webs. Position bottom roller (Figure 2, Item 6) on webs, and push lower roller retainer (Figure 2, Item 5) between lower brake shoe and lining (Figure 2, Item 7) webs until it locks into web holes.
 10. Install upper roller retainer (Figure 2, Item 3) on top roller (Figure 2, Item 2).
 11. Pull S-camshaft end of upper brake shoe and lining (Figure 2, Item 1) up.
 12. Squeeze sides of upper roller retainer (Figure 2, Item 3) together so it fits between upper brake shoe and lining (Figure 2, Item 1) webs. Position top roller (Figure 2, Item 2) on webs, and push upper roller retainer (Figure 2, Item 13) between upper brake shoe and lining (Figure 2, Item 1) webs.
 13. Adjust automatic slack adjusters manually as required (WP 0040).

INSTALLATION - Continued

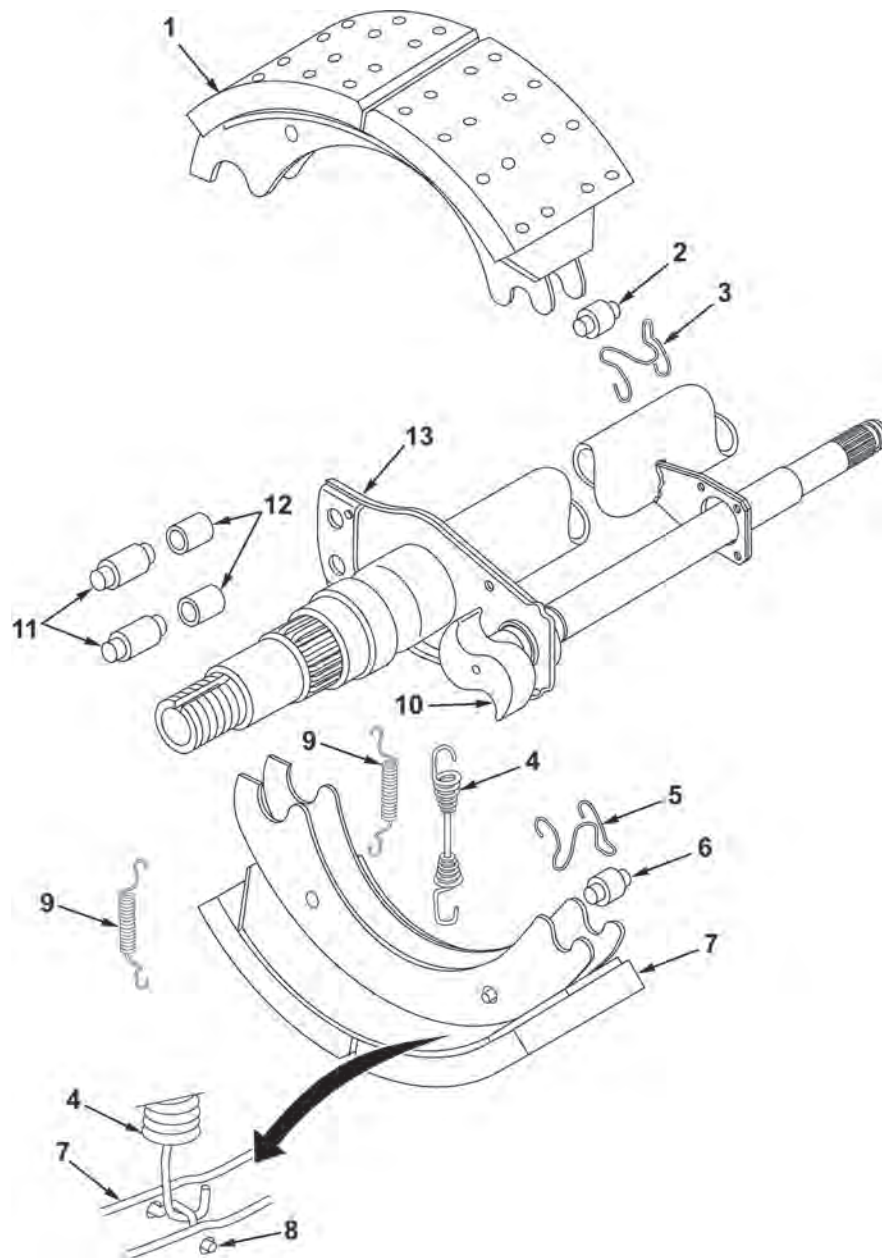


Figure 2. Service Brakes – Shoes and Linings Installation.

END OF TASK

DUST SHIELD REMOVAL

1. Remove drum (Figure 3, Item 1) or move it outboard of brake spider.

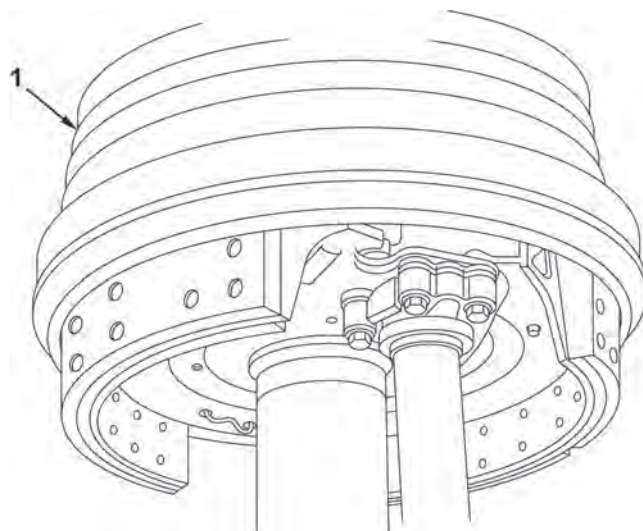


Figure 3. Brake Drum Removal.

2. Remove dust shield (Figure 6, Item 1) from filler plate bracket (Figure 4, Item 1) by removing two each nuts (Figure 6, Item 2).

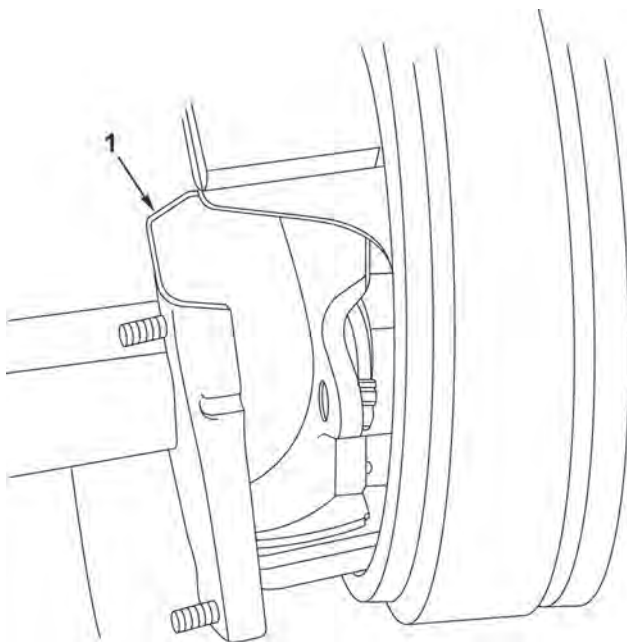


Figure 4. Filler Plate Assembly.

DUST SHIELD REMOVAL - Continued

3. Remove filler plate bracket (Figure 5, Item 2) from brake spider (Figure 5, Item 4) by removing two each self-tapping screws (Figure 5, Item 3).

END OF TASK**DUST SHIELD INSTALLATION**

1. Install filler plate bracket (Figure 5, Item 2) onto brake spider (Figure 5, Item 4) using two each self-tapping screws (Figure 5, Item 3).
2. Assemble large C-section of dust shield (Figure 6, Item 1) onto filler plate bracket studs (Figure 5, Item 1). Install two nuts (Figure 6, Item 2) to hold C-section onto filler plate bracket (Figure 5, Item 2).

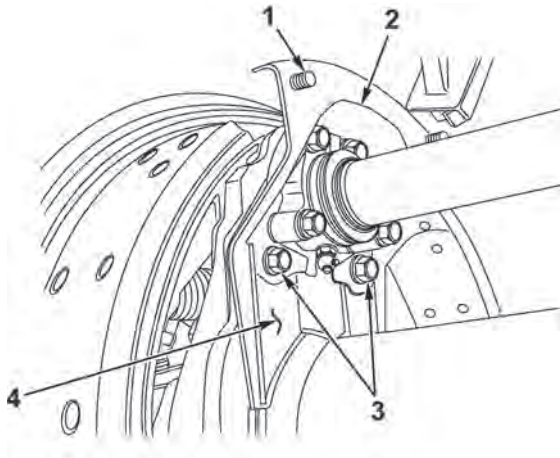


Figure 5. Self-Tapping Screws Assembly and Installation.

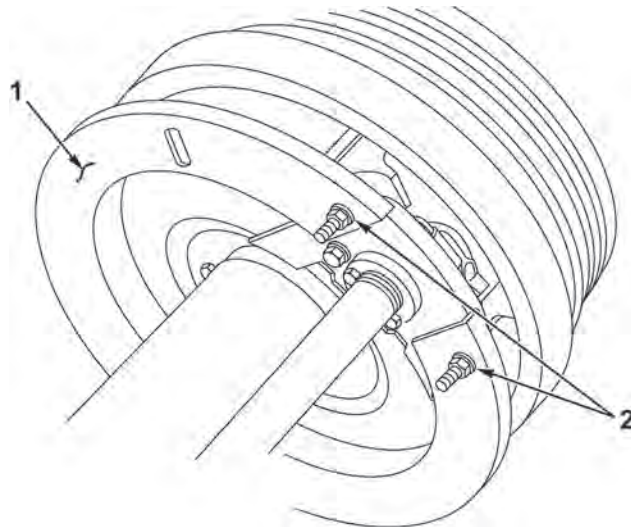


Figure 6. Dust Shield C-Section Assembly and Installation.

DUST SHIELD INSTALLATION - Continued

3. Reposition brake drum (Figure 7, Item 1) tight against hub flange, and check for any dust shield interferences. If there are any light interference conditions, dust shield can be slightly displaced by using small pry bar between brake drum (Figure 7, Item 1) and dust shield in area where they are rubbing.

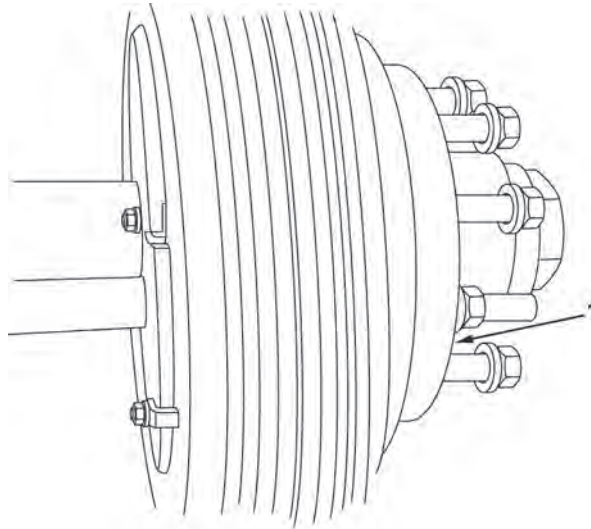


Figure 7. Filler Plate Installation.

4. Ensure plugs (Figure 8, Item 1) are installed.

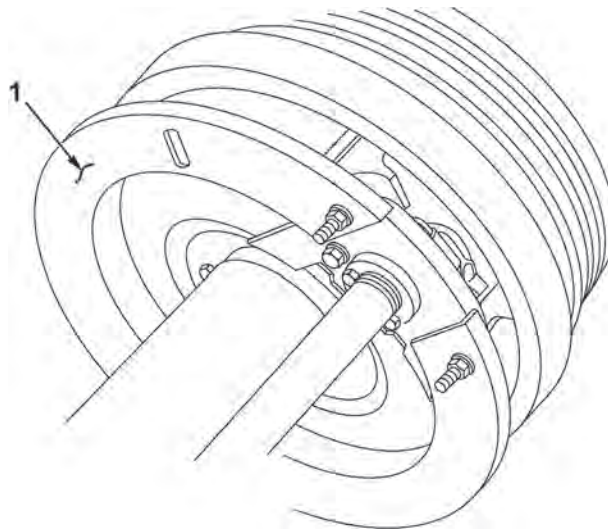


Figure 8. Plug Installation.

END OF TASK

FOLLOW-ON TASKS

1. Install brake drum (WP 0050).
2. Install tires and wheels (WP 0026).
3. Remove jack stands.
4. Connect semitrailer to prime mover (WP 0005).
5. Raise landing legs (WP 0005).
6. Remove and store chock blocks and ground boards (WP 0005).
7. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

AUTOMATIC SLACK ADJUSTERS MAINTENANCE

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)

Equipment Condition

Landing legs down (WP 0005)

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

CAUTION

- DO NOT use electrical or pneumatic tools for slack adjustment.
- Start initial adjustments procedure with measurement, not teardown.
- Block wheels to prevent vehicle from rolling.
- Ensure system tank pressure is above 100 psi (689 kPa).
- Failure to comply may result in damage to equipment.

NOTE

There are four Automatic Slack Adjusters (ASA), and they are removed and installed the same way. These procedures cover one ASA.

REMOVAL

1. Remove cotter key (Figure 1, Item 3) and clevis pin (Figure 1, Item 1) from clevis (Figure 1, Item 2).
2. Remove retaining clip (Figure 1, Item 5) and washer (Figure 1, Item 6) from camshaft (Figure 1, Item 11).
3. Remove ASA control arm (Figure 1, Item 4) and washer (Figure 1, Item 12) from camshaft (Figure 1, Item 11).
4. Remove nut (Figure 1, Item 10), bracket (Figure 1, Item 9), stud (Figure 1, Item 8), and bushing (Figure 1, Item 7).

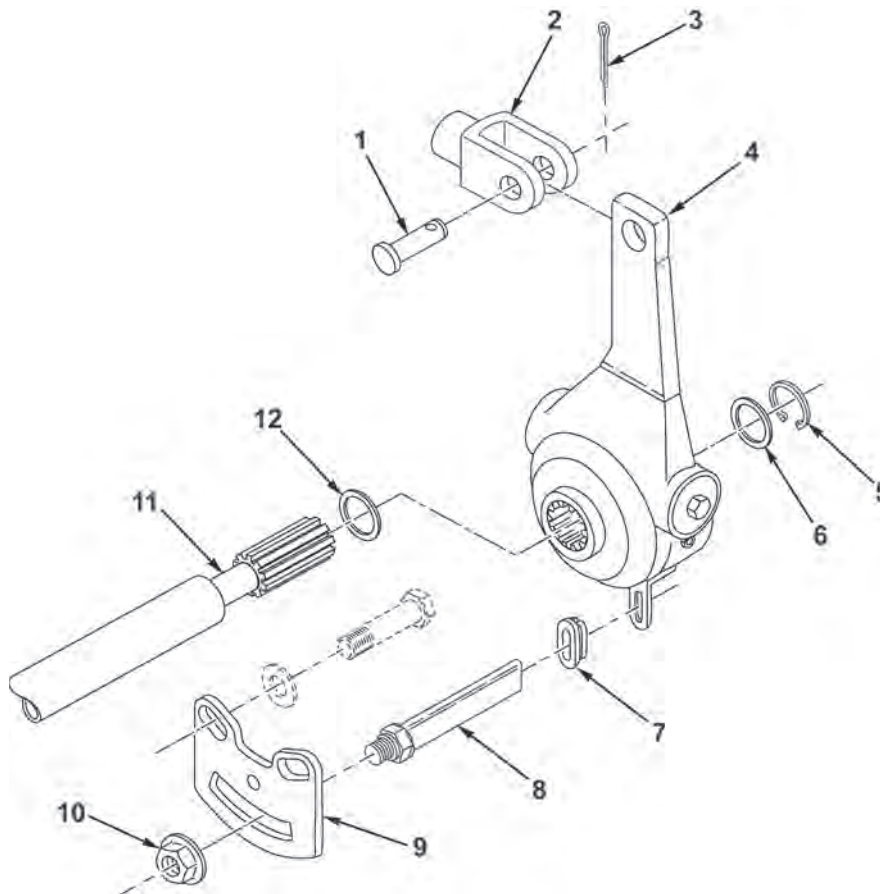


Figure 1. Automatic Slack Adjusters (ASA) Removal.

END OF TASK

INSTALLATION**WARNING**

- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of, or in line with, the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

- Chock wheels to prevent semitrailer from moving. Check that the pushrod on the air brake is FULLY RETRACTED. Apply air pressure to release spring brake.
 - If air pressure is not available, spring brake must be completely caged back. Install anchor bracket, but DO NOT tighten air brake chamber nut; leave loose.
 - Block wheels to prevent vehicle from rolling. Ensure system tank pressure is above 100 psi (689 kPa).
1. Check that pushrod is fully retracted; apply air to release spring brake. If air is not available, spring brake must be manually caged back.

INSTALLATION - Continued**NOTE**

Some anchor brackets have two mounting holes. Proper mounting location is determined by length of ASA control arm: 5-in. (127-mm) and 5-1/2-in. (139-mm) ASA control arms use shorter hole locations, while 6-in. (152-mm) and 6-1/2-in. (165-mm)-length ASA control arms use longer hole locations.

2. Install anchor bracket (Figure 2, Item 10) loosely.
3. Install bushing (Figure 2, Item 8), stud (Figure 2, Item 9), and nut (Figure 2, Item 11) to anchor bracket (Figure 2, Item 10) loosely at this time.

WARNING

DO NOT use grease with antiseize compound, more than 3-percent molysulfide content, or "white" grease in the automatic slack adjusters. These lubricants will adversely affect the friction clutch so it will not hold the adjustment, resulting in premature failure. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

4. Apply antiseize compound to camshaft (Figure 2, Item 12) splines, then install washer (Figure 2, Item 13) on camshaft (Figure 2, Item 12).
5. Install ASA control arm (Figure 2, Item 4) onto camshaft (Figure 2, Item 12) with adjusting nut (Figure 2, Item 7) pointing away from brake chamber.
6. Use at least one spacer (Figure 2, Item 13) and enough outer washers (Figure 2, Item 6) to allow no more than 0.060 in. (1.5 mm) movement of ASA control arm (Figure 2, Item 4) on camshaft (Figure 2, Item 12). Secure ASA control arm (Figure 2, Item 4) on camshaft (Figure 2, Item 12) using clip (Figure 2, Item 5).

NOTE

DO NOT pull pushrod out to meet the brake adjuster.

7. Rotate adjusting nut (Figure 2, Item 7) clockwise, adjusting until clevis (Figure 2, Item 2) hole lines up with ASA control arm (Figure 2, Item 4) hole.
8. Apply antiseize compound to clevis pin (Figure 2, Item 1), install pin (Figure 2, Item 1) through clevis (Figure 2, Item 2) and ASA control arm (Figure 2, Item 4). Secure with cotter key (Figure 2, Item 3).
9. Place ASA control arm (Figure 2, Item 4) anywhere within range of anchor bracket (Figure 2, Item 10) slot for automatic adjustment. Manufacturer recommends rotating all ASA control arms (Figure 2, Item 4) toward axle until they come to complete stop, securing in position, and creating "common" position for all wheels.
10. Tighten anchor bracket (Figure 2, Item 10); then tighten stud (Figure 2, Item 9) to anchor bracket (Figure 2, Item 10), using nut (Figure 2, Item 11).

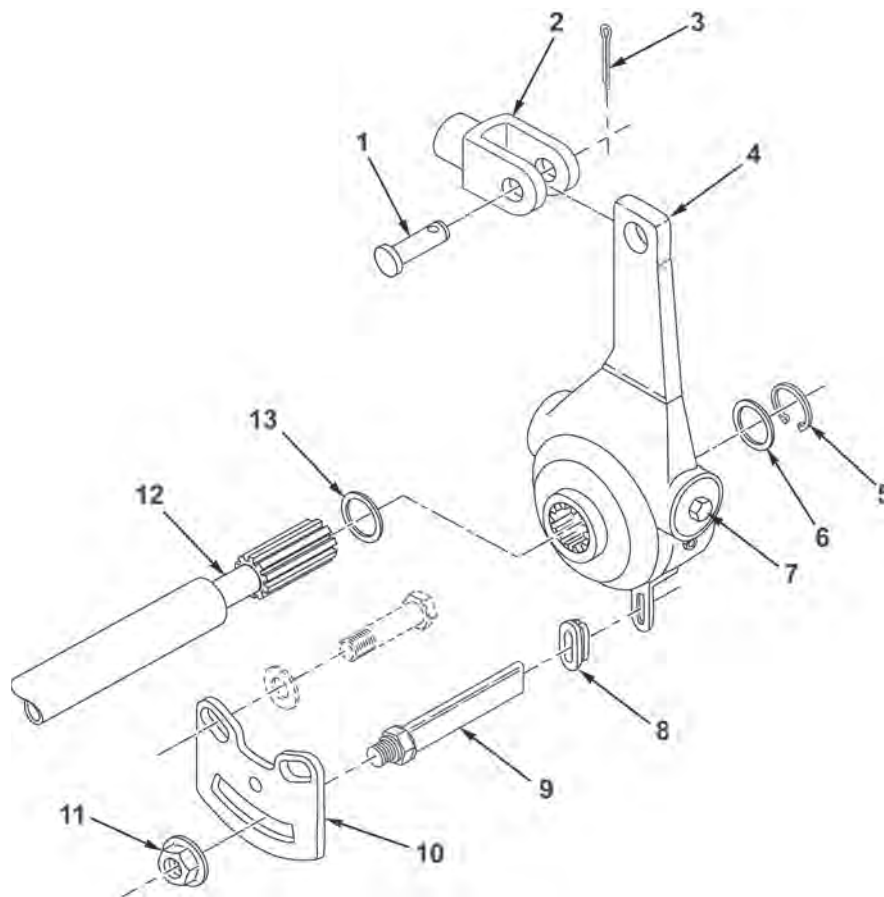
INSTALLATION - Continued

Figure 2. Automatic Slack Adjusters (ASA) Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
ELECTRONIC CONTROL UNIT (ECU) VALVE REPLACEMENT

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked on both sides of vehicle
(WP 0005)

Ground boards emplaced (WP 0005)

Air reservoirs drained (WP 0024)

Equipment Condition

Landing legs down (WP 0005)

WARNING

- Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

CAUTION

DO NOT use thread sealing tape. Failure to comply may result in equipment damage.

REMOVAL

1. Disconnect four sensor cables (Figure 1, Item 6) from ECU valve (Figure 1, Item 2).
2. Disconnect three electrical cables (Figure 1, Item 3) from ECU valve (Figure 1, Item 2).
3. Remove two hoses (Figure 1, Item 5) and elbow fittings (Figure 1, Item 4) from curbside of ECU valve (Figure 1, Item 2).
4. Remove two pipe plugs (Figure 1, Item 7) from rear of ECU valve (Figure 1, Item 2).
5. Remove two elbow fittings (Figure 1, Item 4) and hoses (Figure 1, Item 5) from roadside of ECU valve (Figure 1, Item 2).
6. Remove pipe nipple (Figure 1, Item 1) from front air reservoir, and pull away ECU valve (Figure 1, Item 2) from front air reservoir.

END OF TASK

INSTALLATION

WARNING



- Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
 - DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
1. Apply antiseize compound to threads of two elbow fittings (Figure 1, Item 4), pipe plugs (Figure 1, Item 7), and pipe nipple (Figure 1, Item 1).
 2. Install two pipe plugs (Figure 1, Item 7) and pipe nipple (Figure 1, Item 1) on ECU valve (Figure 1, Item 2).
 3. Install ECU valve (Figure 1, Item 2) and pipe nipple (Figure 1, Item 1) on front air reservoir.
 4. Install two elbow fittings (Figure 1, Item 4) and hoses (Figure 1, Item 5) on roadside of ECU valve (Figure 1, Item 2).
 5. Install two elbow fittings (Figure 1, Item 4) and hoses (Figure 1, Item 5) to curbside of ECU valve (Figure 1, Item 2).
 6. Connect three electrical cables (Figure 1, Item 3) to ECU valve (Figure 1, Item 2).
 7. Connect four sensor cables (Figure 1, Item 6) to ECU valve (Figure 1, Item 2).

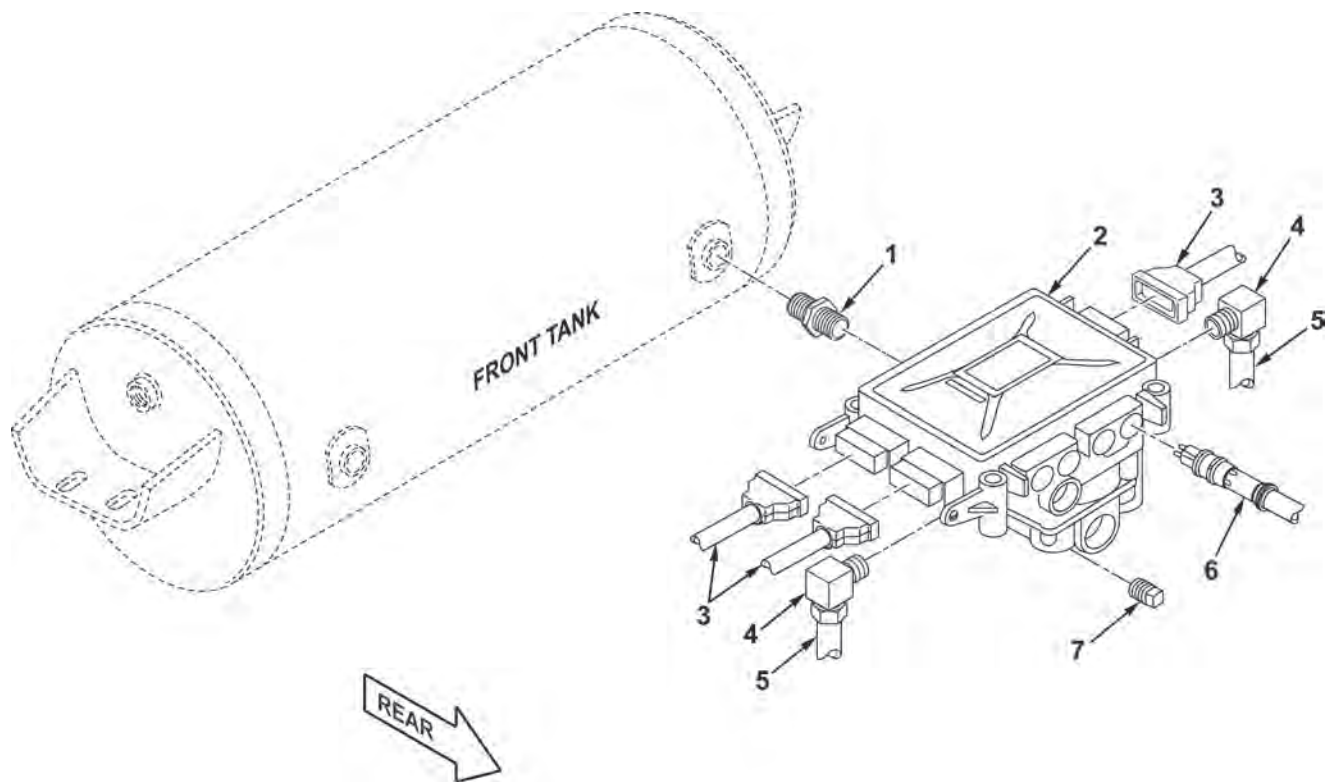
INSTALLATION - Continued

Figure 1. Electronic Control Unit (ECU) Valve Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Close air reservoirs (WP 0024).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Road test to check for air leaks and warning light operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
ANTILOCK BRAKE SYSTEM (ABS) BRAKE POWER CONNECTIONS REPLACEMENT

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Locknut Qty: 4 (WP 0100, Figure 11, Item 7)
Self-Tapping Screw
Qty: 2 (WP 0100, Figure 11, Item 11)
Strap, Tiedown
Qty: AR (WP 0137, Table 1, Item 38)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)

Equipment Condition

Landing legs down (WP 0005)

WARNING

- Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL

1. Remove four sensor clips (Figure 1, Item 10) from four sensors (Figure 1, Item 9) on inside hub of four inner wheels.
2. Remove four sensors (Figure 1, Item 9) from inside hub of four inner wheels.
3. Disconnect four sensor cables (Figure 1, Item 8) from four sensors (Figure 1, Item 9).
4. Disconnect four sensor cables (Figure 1, Item 8) from Electronic Control Unit (ECU) valve.
5. Disconnect diagnostic tool (Figure 1, Item 1) from power/diagnostic cable (Figure 1, Item 4).
6. Disconnect power/diagnostic cable (Figure 1, Item 4) from ECU valve, power supply, and mounting bracket (Figure 1, Item 3), removing two self-tapping screws (Figure 1, Item 2), four cap screws (Figure 1, Item 7), eight washers (Figure 1, Item 6), and four locknuts (Figure 1, Item 5). Discard locknuts (Figure 1, Item 5) and self-tapping screws (Figure 1, Item 2).

END OF TASK

INSTALLATION

1. Connect diagnostic/power cable (Figure 1, Item 4) to ECU valve, power supply, and mounting bracket (Figure 1, Item 3) with two new self-tapping screws (Figure 1, Item 2), four cap screws (Figure 1, Item 7), eight washers (Figure 1, Item 6), and four new locknuts (Figure 1, Item 5).
2. Connect diagnostic tool (Figure 1, Item 1) to diagnostic/power cable (Figure 1, Item 4).
3. Connect four sensor cables (Figure 1, Item 8) to ECU valve.
4. Connect four sensor cables (Figure 1, Item 8) to four sensors (Figure 1, Item 9).
5. Install four sensors (Figure 1, Item 9) on inside hubs of the four inner wheels. Hand-install sensors (Figure 1, Item 9) or lightly push into clip using a wooden dowel rod.
6. Secure four sensors (Figure 1, Item 9) to wheel hubs with sensor clips (Figure 1, Item 10).

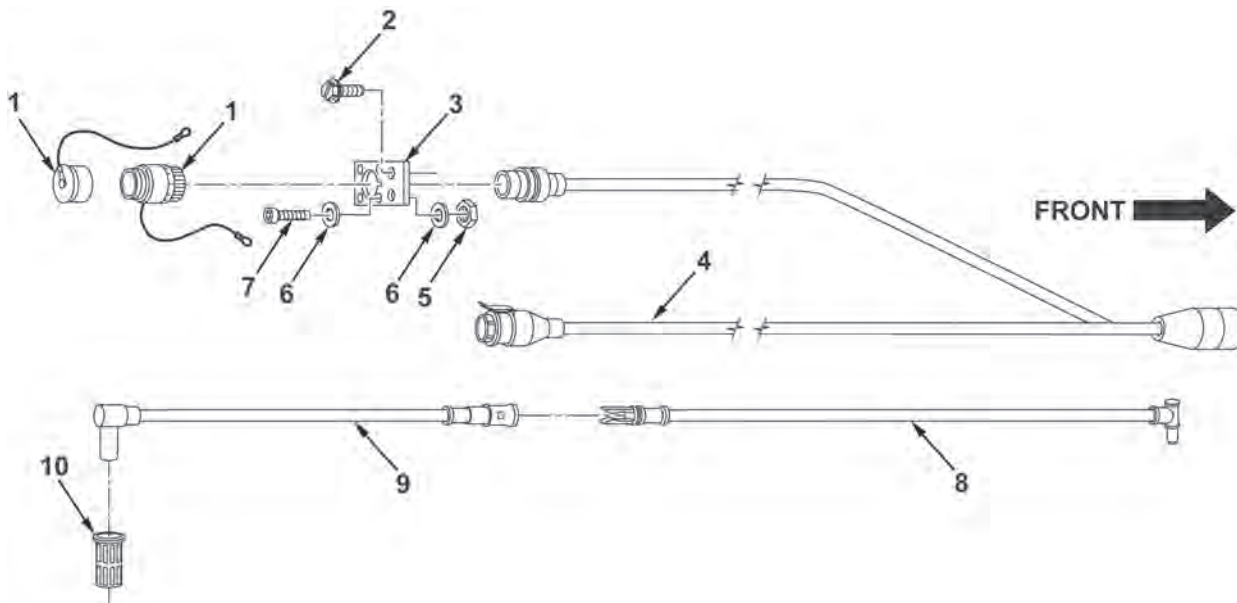


Figure 1. ABS Brake Power Connections Removal and Installation.

INSTALLATION - Continued**CAUTION**

Sensor cables must be strapped at the 12 o'clock or 3 o'clock position on the axle (top or rearward side of axle) to protect them during off-road operation. Use as many tiedown straps as required to ensure the cables are tightly secured to the axle ends. Failure to comply may result in equipment damage.

NOTE

Attach nylon tiedown straps to axle to allow for easy replacement. Locking tab shall be situated within 90 degrees of axle top.

7. Secure sensor cables (Figure 2, Item 1) to axle with nylon tiedown straps (Figure 2, Item 2).

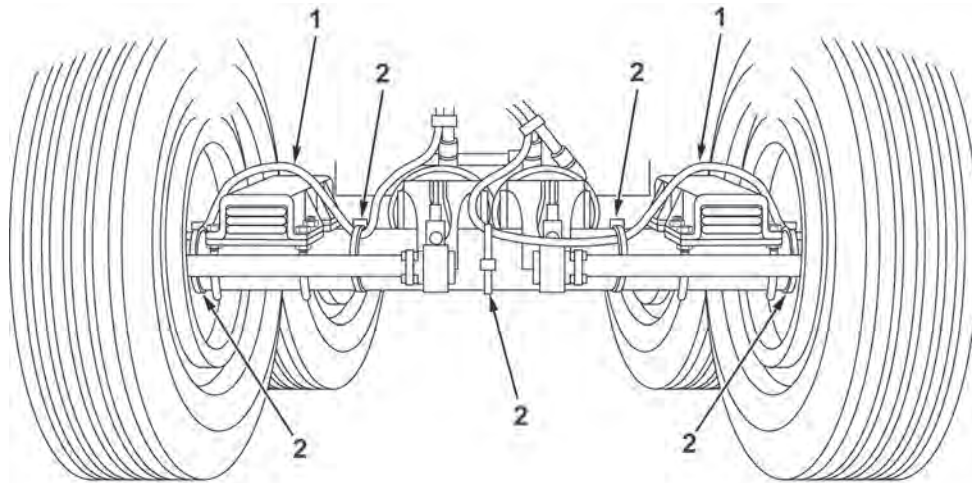


Figure 2. Sensor Cables.

END OF TASK**FOLLOW-ON TASKS**

1. Close air reservoirs (WP 0024).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Road test to check for ABS warning light operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE AIR LINES AND FITTINGS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)

Materials/Parts

Detergent (WP 0137, Table 1, Item 18)
Hose Clamp
Qty: AR (WP 0101, Figure 12, Item 16)
Retaining Clip
Qty: AR (WP 0101, Figure 12, Item 17)

References

WP 0041
WP 0046

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)

WARNING



- Compressed air for cleaning purposes should not exceed 30 psi (207 kPa). Particles blown by compressed air are hazardous. Ensure the air stream is directed away from user and other personnel in the area. To prevent injury, user must wear eye protection or face shield when using compressed air. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.
- DO NOT overtighten hose end brass fittings. The fittings should be installed finger tight with an additional 1 to 1.5 turns using a wrench. DO NOT twist hoses. Check for air leaks. Failure to comply may cause fitting failure or brake lockup. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL

1. Discard hose clips (Figure 1, Item 43) and clamps (Figure 1, Item 42) if broken.
2. Remove two adapters (Figure 1, Items 2 and 37) from two gladhands (Figure 1, Items 1 and 38); and remove two tubes (Figure 1, Items 3 and 36), adapters (Figure 1, Items 4 and 39), tube/hose adapters (Figure 1, Items 5 and 35), tube (Figure 1, Item 62), and hose (Figure 1, Item 40).
3. Remove adapter (Figure 1, Item 8) from Brake Control Valve (BCV) (Figure 1, Item 9).
4. Remove pipe tee (Figure 1, Item 20) from Electronic Control Unit (ECU) valve (Figure 1, Item 33), and remove elbow (Figure 1, Item 26) from BCV (Figure 1, Item 9).
5. Remove two elbows (Figure 1, Items 34 and 44) from front and rear air reservoirs, and remove hose (Figure 1, Item 41).
6. Remove adapter (Figure 1, Item 12) from BCV (Figure 1, Item 9).
7. Remove tube (Figure 1, Item 60) from elbow (Figure 1, Item 59), pipe coupling (Figure 1, Item 58), and tube assembly (Figure 1, Item 57).
8. Remove two elbows (Figure 1, Item 50), tubes (Figure 1, Item 54), adapters (Figure 1, Item 55), and pipe tee (Figure 1, Item 56).
9. Remove two elbows (Figure 1, Items 48 and 49), tube assemblies (Figure 1, Items 47 and 52), pipe couplings (Figure 1, Items 46 and 53), and elbows (Figure 1, Items 45 and 51).
10. Remove two elbows (Figure 1, Items 6 and 7) from ECU valve (Figure 1, Item 33) and two hoses (Figure 1, Items 14 and 61).
11. Remove two elbows (Figure 1, Item 19), two tubes (Figure 1, Item 23), two adapters (Figure 1, Item 24), and pipe tee (Figure 1, Item 16).
12. Remove three elbows (Figure 1, Items 15, 17, and 22), tube assemblies (Figure 1, Items 18, 21, and 25), and pipe bushings (Figure 1, Items 29, 31, and 63).
13. Remove two elbows (Figure 1, Items 30 and 32) from ECU valve (Figure 1, Item 33) and one elbow (Figure 1, Item 13) from BCV (Figure 1, Item 9).
14. Remove two pipe plugs (Figure 1, Items 10 and 11) from BCV (Figure 1, Item 9) (WP 0046).
15. Remove two pipe plugs (Figure 1, Items 27 and 28) from ECU valve (Figure 1, Item 33) (WP 0041).

REMOVAL - Continued

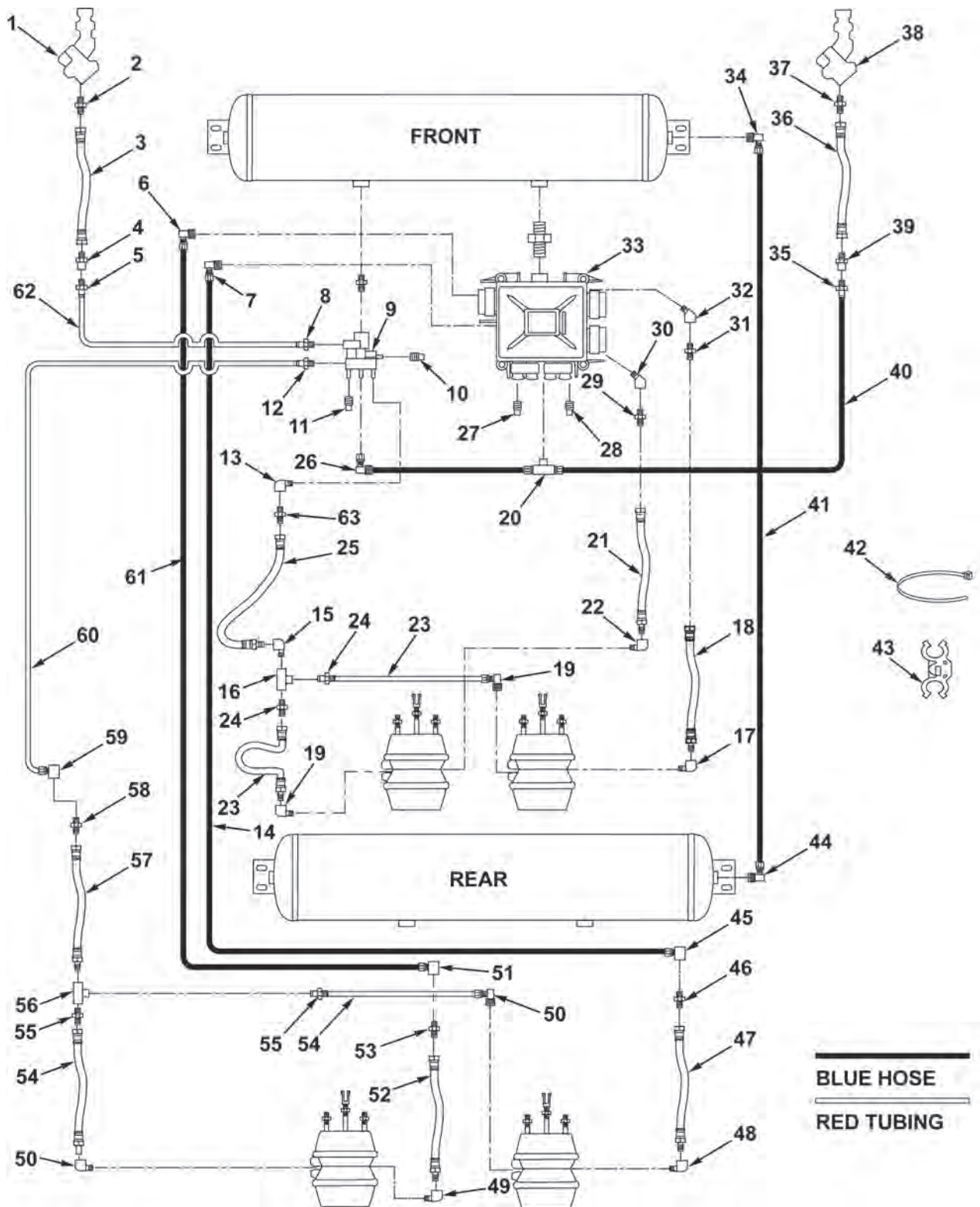


Figure 1. Air Lines and Fittings Removal.

END OF TASK

INSTALLATION

1. Install two pipe plugs (Figure 2, Items 27 and 28) in ECU valve (Figure 2, Item 33) (WP 0041).
2. Install two pipe plugs (Figure 2, Items 10 and 11) in BCV (Figure 1, Item 9) (WP 0046).
3. Install two elbows (Figure 2, Items 30 and 32) in ECU valve (Figure 2, Item 33) and one elbow (Figure 2, Item 13) in BCV (Figure 2, Item 9).
4. Install three pipe bushings (Figure 2, Items 29, 31, and 63), tube assemblies (Figure 2, Items 18, 21, and 25), and elbows (Figure 2, Items 15, 17, and 22).
5. Install pipe tee (Figure 2, Item 16), two adapters (Figure 2, Item 24), two tubes (Figure 2, Item 23), and two elbows (Figure 2, Item 19). DO NOT twist tube (Figure 2, Item 23).
6. Install two elbows (Figure 2, Items 6 and 7) onto ECU valve (Figure 2, Item 33) and two hoses (Figure 2, Items 14 and 61).
7. Install two elbows (Figure 2, Items 45 and 51), pipe couplings (Figure 2, Items 46 and 53), tube assemblies (Figure 2, Items 47 and 52), and elbows (Figure 2, Items 48 and 49) in two hoses (Figure 2, Items 14 and 61).
8. Install pipe tee (Figure 2, Item 56), two adapters (Figure 2, Item 55), tubes (Figure 2, Item 54), and elbows (Figure 2, Item 50).
9. Install tube assembly (Figure 2, Item 57), pipe coupling (Figure 2, Item 58), and elbow (Figure 2, Item 59) on tube (Figure 2, Item 60).
10. Install two adapters (Figure 2, Items 8 and 12) on BCV (Figure 2, Item 9). Install two tubes (Figure 2, Items 60 and 62) to adapters (Figure 2, Items 8 and 12).
11. Install two elbows (Figure 2, Items 34 and 44) on front and rear air reservoirs, and install hose (Figure 2, Item 41).
12. Install pipe tee (Figure 2, Item 20) on ECU valve (Figure 2, Item 33), and install elbow (Figure 2, Item 26) on BCV (Figure 2, Item 9).
13. Install two tube/hose adapters (Figure 2, Items 5 and 35), adapters (Figure 2, Items 4 and 39), tubes (Figure 2, Items 3 and 36), and adapters (Figure 2, Items 2 and 37) to gladhands (Figure 2, Items 1 and 38), tube (Figure 2, Item 62), and hose (Figure 2, Item 40).
14. Install new hose clamps (Figure 2, Item 42) and new hose clips (Figure 2, Item 43) as necessary.

INSTALLATION - Continued

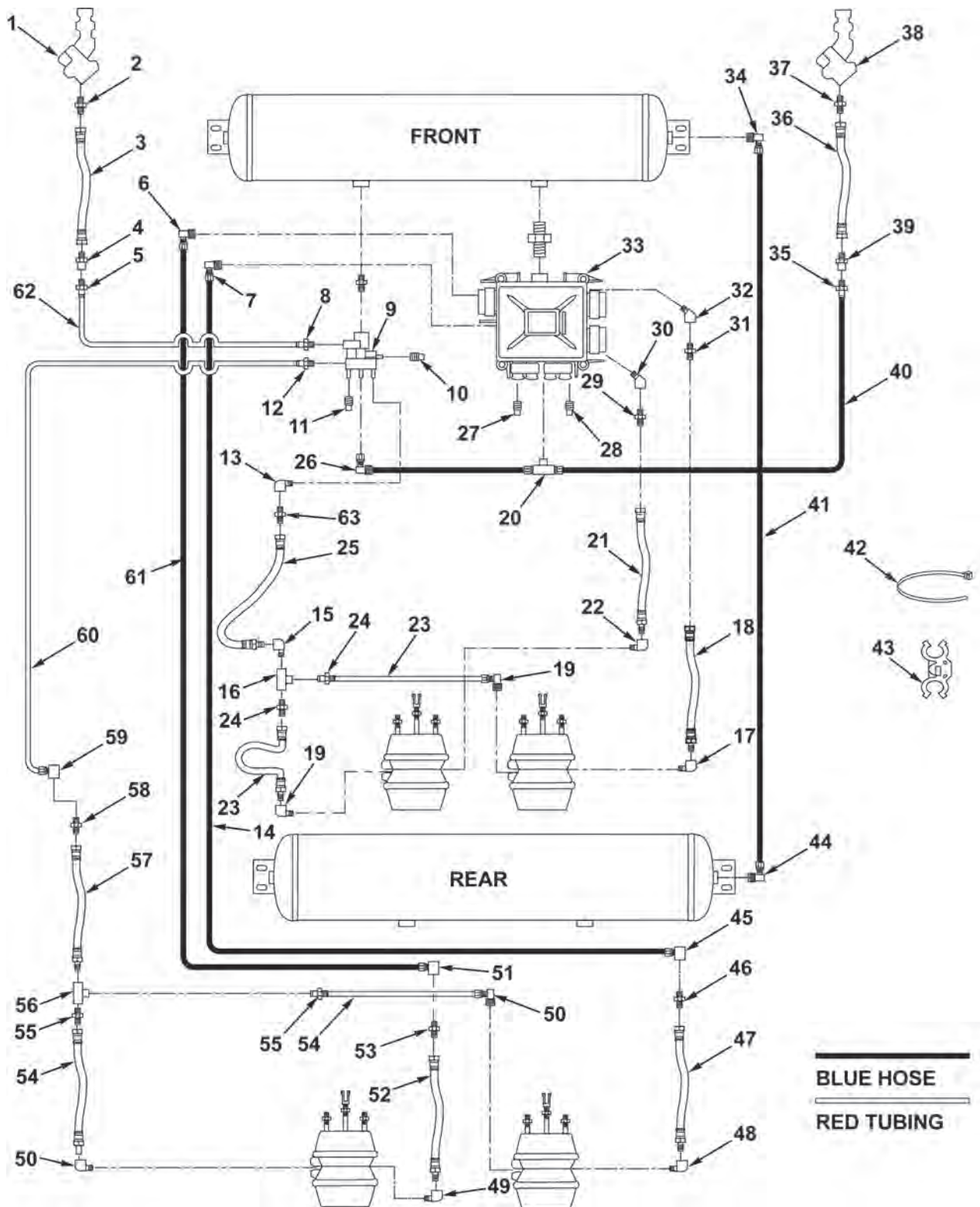


Figure 2. Air Lines and Fittings Installation.

END OF TASK

FOLLOW-ON TASKS

1. Close air reservoir drain (WP 0024).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Pressurize system.
6. Check for leaks.
7. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE AIR BRAKE CHAMBERS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Cotter Pin (WP 0102, Figure 13, Item 4)
Locknut Qty: 2 (WP 0102, Figure 13, Item 3)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)

Equipment Condition

Landing legs down (WP 0005)

WARNING



- To prevent injury, keep hands away from brake chamber pushrods and slack adjusters. They will move as service brakes are operated and will automatically apply if system pressure drops. Hands and fingers may be pinched or cut by moving parts. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- All air brake chambers must be caged before you work on the air brake system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- Before performing any work on the air brake system, chock front and rear wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Disassembly of air brake chambers is NOT authorized. When inspecting or caging air brake chambers, DO NOT position yourself in front of, or in line with, the chamber. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

- Ensure air reservoirs are drained and brake chambers caged before performing work.
- There are four air brake chambers, and they are removed and installed the same way. These procedures cover one air brake chamber.

REMOVAL

1. Disconnect two tubes (Figure 1, Item 3) and remove two fittings (Figure 1, Item 2) from air brake chamber (Figure 1, Item 1).
2. Loosen jamnut (Figure 1, Item 9), remove cotter pin (Figure 1, Item 8) and pin (Figure 1, Item 6), and disconnect yoke (Figure 1, Item 7) from slack adjuster. Remove yoke (Figure 1, Item 7) and jamnut (Figure 1, Item 9) from air brake chamber (Figure 1, Item 1). Discard cotter pin (Figure 1, Item 8).
3. Remove two locknuts (Figure 1, Item 5), washers (Figure 1, Item 4), and air brake chamber (Figure 1, Item 1). Discard locknuts (Figure 1, Item 5).

END OF TASK**INSTALLATION**

1. Install air brake chamber (Figure 1, Item 1) to axle using two washers (Figure 1, Item 4) and new locknuts (Figure 1, Item 5).
2. Install two fittings (Figure 1, Item 2) into air brake chamber (Figure 1, Item 1).
3. Install jamnut (Figure 1, Item 9) and yoke (Figure 1, Item 7) on air brake chamber (Figure 1, Item 1). Attach yoke (Figure 1, Item 7) to slack adjuster using pin (Figure 1, Item 6) and new cotter pin (Figure 1, Item 8).
4. Connect two tubes (Figure 1, Item 3) into two fittings (Figure 1, Item 2) on air brake chamber (Figure 1, Item 1).

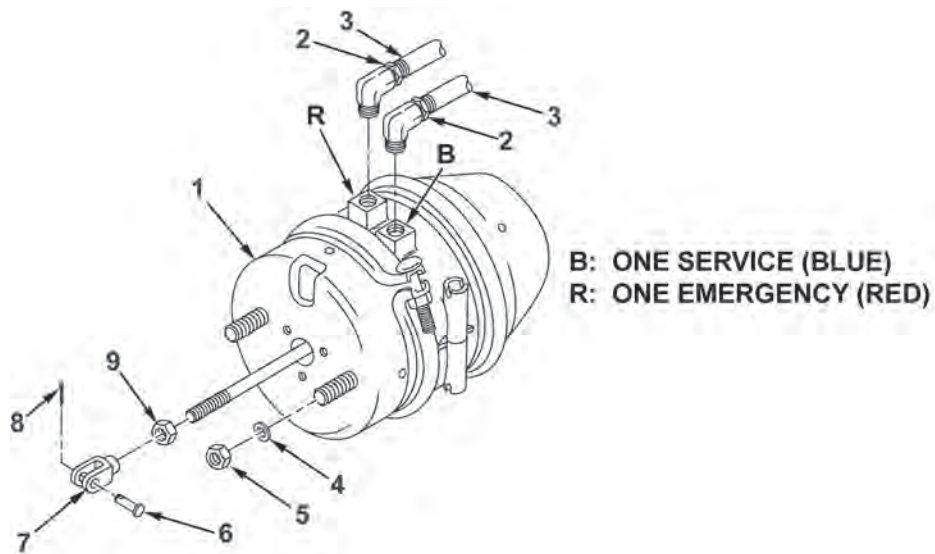


Figure 1. Air Brake Chamber Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Close air reservoirs (WP 0024).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Pressurize system.
6. Check system for air leaks.
7. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE AIR RESERVOIRS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)

Materials/Parts

Detergent (WP 0137, Table 1, Item 18)
Locknut Qty: 8 (WP 0103, Figure 14, Item 7)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)
Electronic Control Unit (ECU) valve removed,
front tank only (WP 0041)
Air brake chamber control valve removed, front
tank only (WP 0046)

Equipment Condition

Landing legs down (WP 0005)

WARNING



Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL

1. Remove four locknuts (Figure 1, Item 5), washers (Figure 1, Item 7), hex screws (Figure 1, Item 8), two rubber pads (Figure 1, Item 6), and front air reservoir (Figure 1, Item 1) from mounts. Discard locknuts (Figure 1, Item 5).
2. Remove drain valve (Figure 1, Item 4) and two pipe plugs (Figure 1, Item 2) from front air reservoir (Figure 1, Item 1).
3. Remove four locknuts (Figure 1, Item 5), washers (Figure 1, Item 7), hex screws (Figure 1, Item 8), two rubber pads (Figure 1, Item 6), and rear air reservoir (Figure 1, Item 9) from mounts. Discard locknuts (Figure 1, Item 5).
4. Remove two pipe plugs (Figure 1, Item 3), drain valve (Figure 1, Item 4), and two pipe plugs (Figure 1, Item 2) from rear air reservoir (Figure 1, Item 9).

END OF TASK**INSTALLATION**

1. Install two pipe plugs (Figure 1, Item 3), drain valve (Figure 1, Item 4), and two pipe plugs (Figure 1, Item 2) on rear air reservoir (Figure 1, Item 9).
2. Install rear air reservoir (Figure 1, Item 9) on mounts using four hex screws (Figure 1, Item 8), washers (Figure 1, Item 7), two rubber pads (Figure 1, Item 6), and four new locknuts (Figure 1, Item 5).
3. Install drain valve (Figure 1, Item 4) and two pipe plugs (Figure 1, Item 2) on front air reservoir (Figure 1, Item 1).
4. Install front air reservoir (Figure 1, Item 1) on mounts using four hex screws (Figure 1, Item 8), washers (Figure 1, Item 7), two rubber pads (Figure 1, Item 6), and four new locknuts (Figure 1, Item 5).

INSTALLATION - Continued

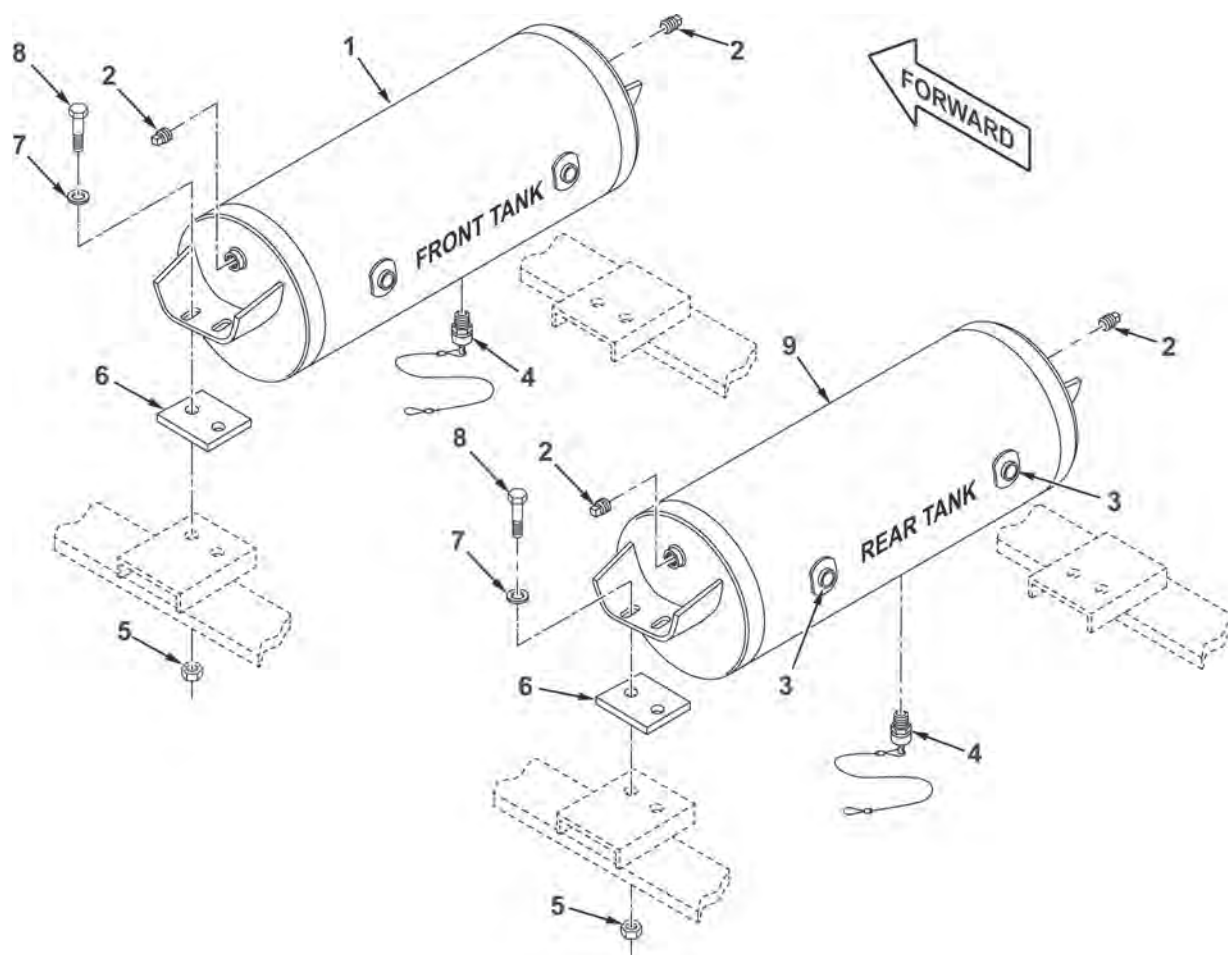


Figure 1. Air Reservoirs Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Close air reservoirs (WP 0024).
2. Install ECU control valve on front tank (WP 0041).
3. Install air brake chamber control valve on front tank (WP 0046).
4. Connect semitrailer to prime mover (WP 0005).
5. Raise landing legs (WP 0005).
6. Remove and store chock blocks and ground boards (WP 0005).
7. Pressurize system.
8. Check system for air leaks.
9. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
AIR BRAKE CHAMBER CONTROL VALVE REPLACEMENT

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

WP 0043

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Air reservoirs drained (WP 0024)

Equipment Condition

Landing legs down (WP 0005)

WARNING

Wear eye protection when under semitrailer. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

- Retain plugs and save after removal.
- The air lines connected to the air brake chamber control valve must be removed (WP 0043) before performing these procedures.

REMOVAL

1. Remove air brake chamber control valve (Figure 1, Item 3) with nipple (Figure 1, Item 1) attached from front air reservoir.
2. Remove nipple (Figure 1, Item 1) and two pipe plugs (Figure 1, Item 2) from air brake chamber control valve (Figure 1, Item 3).

END OF TASK**INSTALLATION**

1. Install nipple (Figure 1, Item 1) in air brake chamber control valve (Figure 1, Item 3) at RES port. Install two pipe plugs (Figure 1, Item 2).
2. Install air brake chamber control valve (Figure 1, Item 3) with nipple (Figure 1, Item 1) in front air reservoir.

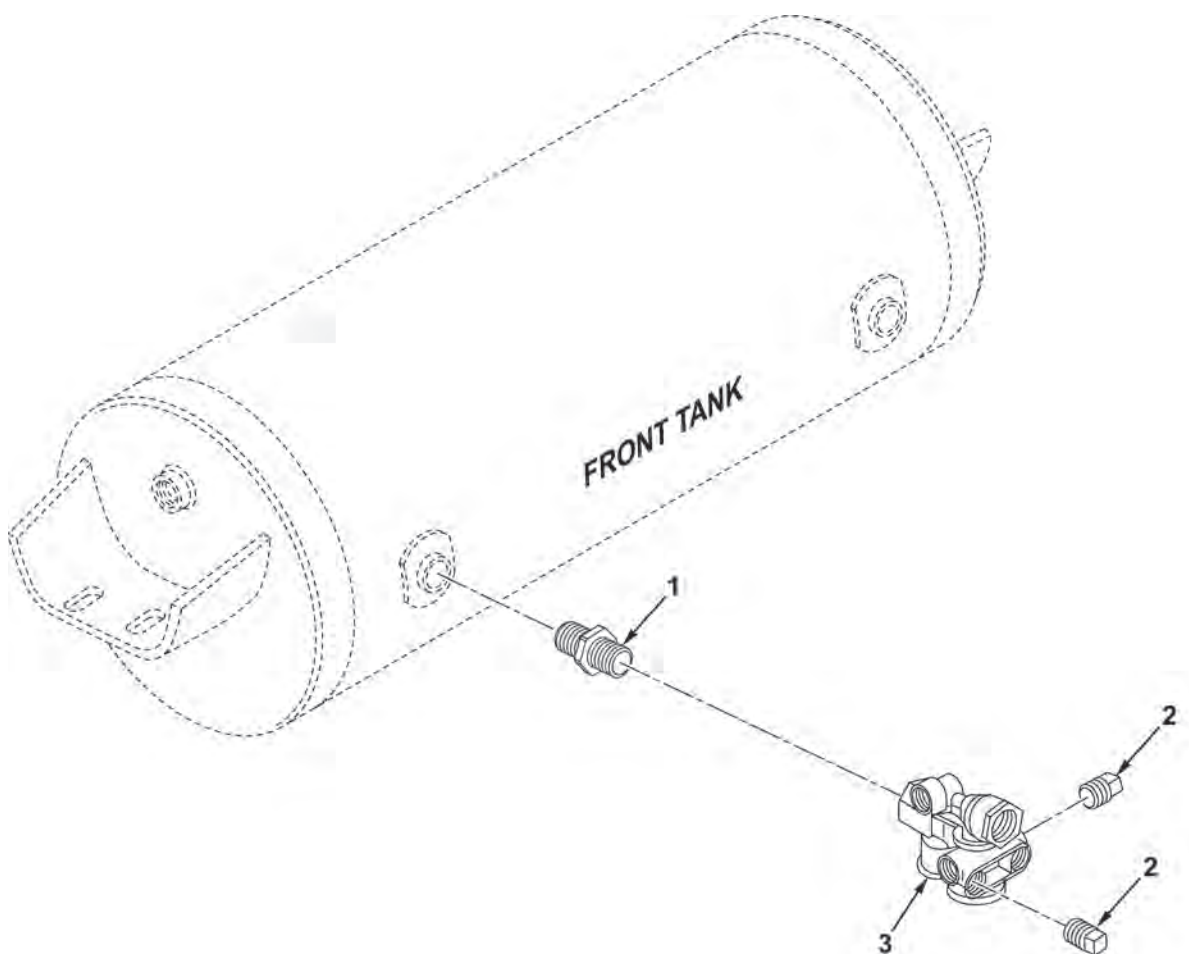


Figure 1. Air Brake Chamber Control Valve Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Connect air lines to air brake chamber control valve (WP 0043).
2. Close air reservoirs (WP 0024).
3. Connect semitrailer to prime mover (WP 0005).
4. Raise landing legs (WP 0005).
5. Remove and store chock blocks and ground boards (WP 0005).
6. Check system for air leaks.
7. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
GLADHANDS MAINTENANCE (M871R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Seal (WP 0105, Figure 16, Item 12)
Seal (WP 0105, Figure 16, Item 14)
Self-Tapping Screw
Qty: 3 (WP 0105, Figure 16, Item 9)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)

Equipment Condition

Landing legs down (WP 0005)

NOTE

- Gladhands are removed and installed the same way. These procedures cover one gladhand.
- Packing seal for service gladhand is blue, and packing seal for emergency gladhand is red.
- Hose for service gladhand is blue, and hose for emergency gladhand is red.

REMOVAL

1. Remove two self-tapping screws (Figure 1, Item 2) and cover plate (Figure 1, Item 1). Discard self-tapping screws (Figure 1, Item 2).
2. Disconnect hose (Figure 2, Item 6) from gladhand (Figure 2, Item 2).
3. Remove self-tapping screw (Figure 2, Item 4), washer (Figure 2, Item 5), and gladhand (Figure 2, Item 2). Discard self-tapping screw (Figure 2, Item 4).
4. Remove packing seal (Figure 2, Item 3) and fitting (Figure 2, Item 1) from gladhand (Figure 2, Item 2).

END OF TASK**INSTALLATION**

1. Install packing seal (Figure 2, Item 3) and fitting (Figure 2, Item 1) in gladhand (Figure 2, Item 2).
2. Install gladhand (Figure 2, Item 2), washer (Figure 2, Item 5), and new self-tapping screw (Figure 2, Item 4).
3. Connect hose (Figure 2, Item 6) to gladhand (Figure 2, Item 2).
4. Install cover plate (Figure 1, Item 1) and two new self-tapping screws (Figure 1, Item 2).

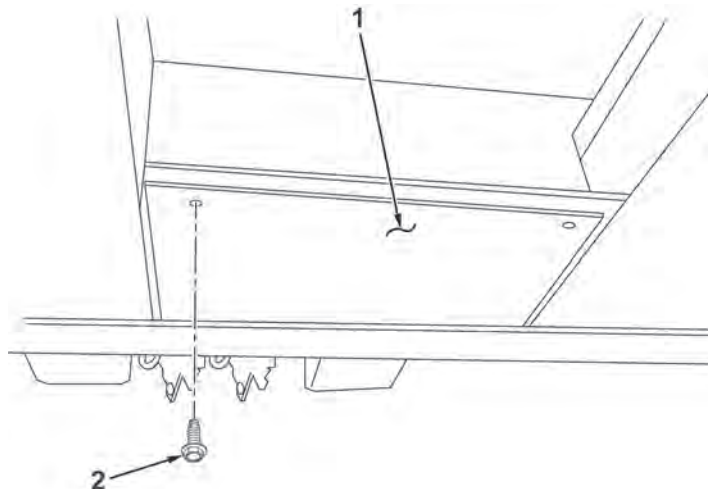


Figure 1. Cover Plate Removal and Installation.

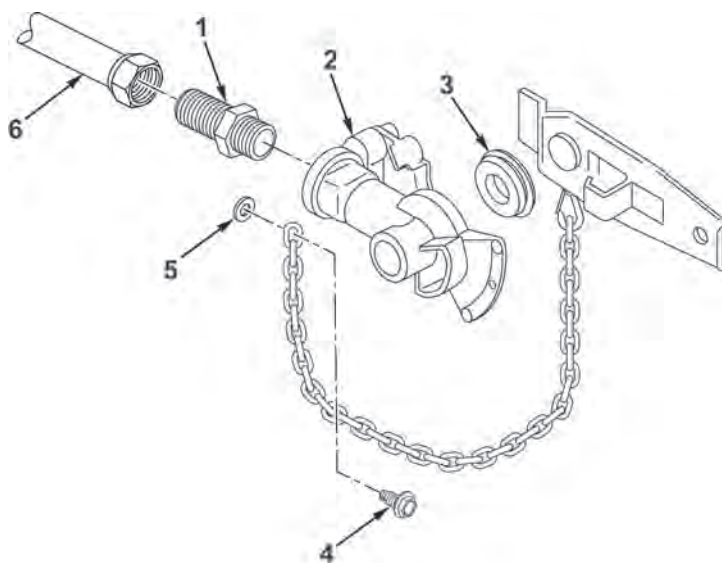
INSTALLATION - Continued

Figure 2. Gladhand Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Close air reservoirs (WP 0024).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Check system for air leaks.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
GLADHANDS MAINTENANCE (M871A1R AND M871A2R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

WP 0085

Materials/Parts

Cap, Protective
(WP 0105, Figure 16, Item 3)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)
Seal (WP 0105, Figure 16, Item 5)
Seal (WP 0105, Figure 16, Item 7)
Self-Tapping Screw
Qty: 3 (WP 0105, Figure 16, Item 1)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Air reservoirs drained (WP 0024)

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

NOTE

- Gladhands are removed and installed the same way. These procedures cover one gladhand.
- Packing seal for service gladhand is blue, and packing seal for emergency gladhand is red.
- Hose for service gladhand is blue, and hose for emergency gladhand is red.

REMOVAL

1. Remove packing seal (Figure 1, Item 5) and dust cap (Figure 1, Item 3) from gladhand (Figure 1, Item 4).
2. Remove three self-tapping screws (Figure 1, Item 1), and pull out gladhand (Figure 1, Item 4). Discard self-tapping screws (Figure 1, Item 1).
3. Disconnect hose (Figure 1, Item 2), and remove gladhand (Figure 1, Item 4).

END OF TASK**INSTALLATION**

1. Connect hose (Figure 1, Item 2) to gladhand (Figure 1, Item 4).
2. Install gladhand (Figure 1, Item 4) and three new self-tapping screws (Figure 1, Item 1).
3. Install packing seal (Figure 1, Item 5) and dust cap (Figure 1, Item 3) on gladhand (Figure 1, Item 4).

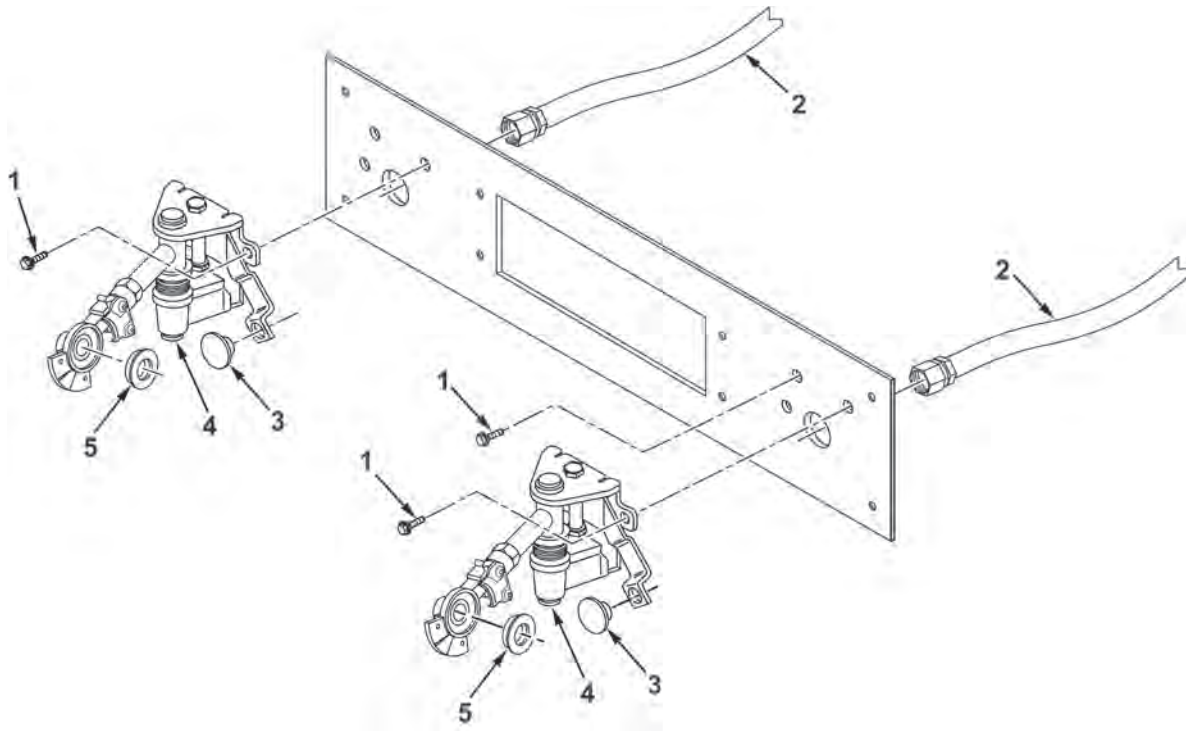


Figure 1. Gladhand Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Lubricate swing arm with 10 wt. oil (WP 0085).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Check system for air leaks.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

SPINDLE NUT REPLACEMENT AND WHEEL BEARING ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Bushing Driver Set, 3-1/16 to 4-1/2 in.
(WP 0138, Table 1, Item 3)
Dial Indicator (WP 0138, Table 1, Item 6)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)

Personnel Required

(2)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Tires and wheels removed (WP 0026)
Brake drum removed (WP 0050)
Ground boards emplaced (WP 0005)

Materials/Parts

Locknut With Keeper Arm Assembly Qty: AR
(WP 0106, Figure 17, Item 9)

REMOVAL

WARNING



- A new keeper arm and locknut must be replaced when removed. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CAUTION

Remove the keeper arm before removing the locknut. Failure to comply will result in damaged threads to both the locknut and the axle end spindle. DO NOT overtorque the locknut. Failure to comply will result in stripped threads.

NOTE

- Spindle nut is composed of two parts: locknut and keeper arm, which is painted orange on side that must be facing out.
- There are four sets of hubs and drums on semitrailer. These procedures remove and install one complete set.

REMOVAL - Continued

1. Support axle on applicable side just high enough so wheel can be rotated.
2. Use small-blade screwdriver to carefully pry each keeper arm (Figure 1, Item 4) from undercut groove in locknut (Figure 1, Item 3), and release keeper arm (Figure 1, Item 4) from locknut (Figure 1, Item 3). Arms are on opposite sides of open end of keeper arm (Figure 1, Item 4).
3. Remove or loosen locknut (Figure 1, Item 3) as required. Never use torque wrench to loosen.
4. Discard keeper arm and locknut.

END OF TASK**INSTALLATION**

1. Thread new locknut (Figure 1, Item 3), without keeper arm (Figure 1, Item 4), onto axle spindle (Figure 1, Item 2) threaded end, keeper side facing out. Hand tighten locknut (Figure 1, Item 3) against outer bearing (Figure 1, Item 5).

CAUTION

DO NOT overtorque locknut. Failure to comply will result in stripped threads.

2. While slowly rotating wheel/hub (Figure 1, Item 1), use torque wrench and socket to torque locknut (Figure 1, Item 3) to 200 lb-ft (271 N•m). This action will seat the inner and outer bearings.
3. Back off locknut (Figure 1, Item 3) until it is hand tight. Never use torque wrench to loosen locknut.
4. While slowly rotating wheel/hub (Figure 1, Item 1), use torque wrench and socket to torque locknut (Figure 1, Item 3) again to 100 lb-ft (136 N•m). This action will apply final seat to inner and outer bearings (Figure 1, Item 5).

NOTE

After 1/4-turn back-off, locknut should be movable by hand.

5. Back off locknut (Figure 1, Item 3) 1/4 turn. Never use torque wrench to loosen.

CAUTION

- Orange side of the keeper arm must be facing out.
- Only a small-blade screwdriver is required to remove/install the keeper arm.
- Keeper arm's square tang must not bottom in the spindle square keyway.
- No other washers or lockrings are required for this installation.
- Keeper arm's teeth must fully engage locknut teeth.
- DO NOT force keeper arm into position. Force will damage keeper arm.
- Failure to comply may result in damage to equipment.

INSTALLATION - Continued

6. Install new keeper arm (Figure 1, Item 4), orange side facing out, by inserting square outer tab into undercut groove on locknut (Figure 1, Item 3). Align square cut keyway groove on spindle (Figure 1, Item 2). Rotate keeper arm (Figure 1, Item 4) into position so that inner keeper tang tilts into square spindle keyway. Teeth on keeper arm (Figure 1, Item 4) will engage teeth on locknut (Figure 1, Item 3).
7. If square inner tang does not line up with spindle square keyway, back off very slightly on locknut (Figure 1, Item 3) (no more than one tooth) until it does. Back-off will engage keeper arm (Figure 1, Item 4) and locknut (Figure 1, Item 3) teeth if this did not happen in Step 6. Using small-blade screwdriver, carefully compress and insert keeper arm (Figure 1, Item 4) into undercut groove in locknut (Figure 1, Item 3). Again, orange side of keeper arm (Figure 1, Item 4) **MUST** be facing out.
8. Inspect installation to ensure keeper arm (Figure 1, Item 4) outer tab is fully seated into undercut groove in locknut (Figure 1, Item 3). Use small-blade screwdriver to gently flex keeper arm (Figure 1, Item 4). Visually inspect that seating and teeth are fully engaged in locknut (Figure 1, Item 3) teeth.
9. Inspect square keeper tang to ensure it does not contact bottom of square groove on axle spindle (Figure 1, Item 2).
10. Use dial indicator to measure bearing (Figure 1, Item 5) settings and verify bearing end play. Locknut (Figure 1, Item 3) will produce consistent setting of between 0.001 and 0.003 in. (0.025 and 0.076 mm) end play.

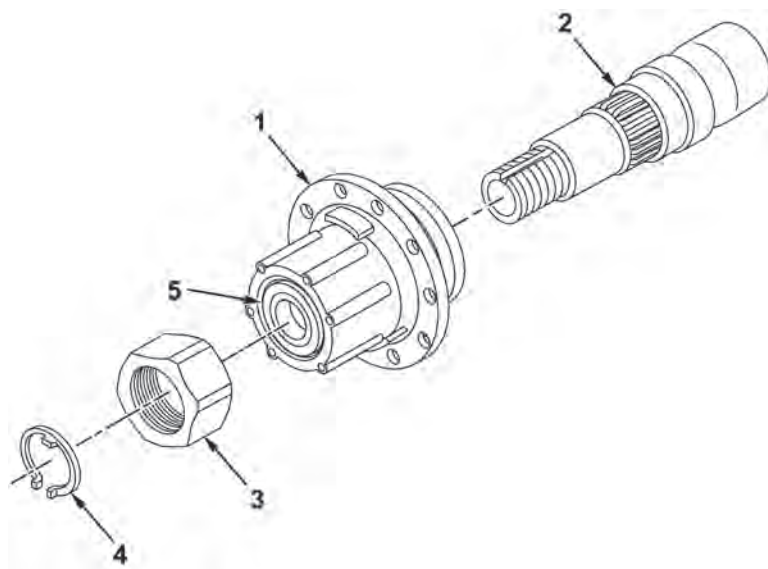


Figure 1. Spindle Nut Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Install brake drums (WP 0050).
2. Install tires and wheels (WP 0026).
3. Connect semitrailer to prime mover (WP 0005).
4. Raise landing legs (WP 0005).
5. Remove ground boards (WP 0005).
6. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE HUBS AND DRUMS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Bushing Driver Set, 3-1/16 to 4-1/2 in.
(WP 0138, Table 1, Item 3)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)

Materials/Parts

Gasket (WP 0106, Figure 17, Item 10)
Locknut With Keeper Arm Assembly
(WP 0106, Figure 17, Item 9)
Lockwasher
Qty: 6 (WP 0106, Figure 17, Item 12)

Materials/Parts (cont.)

Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)
Seal (WP 0106, Figure 17, Item 8)

References

WP 0049

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Tires and wheels removed (WP 0026)
Ground boards emplaced (WP 0005)

WARNING



Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

- Antilock Brake System (ABS) tone ring is part of hub assembly, not a separate item of supply.
- There are four sets of hubs and drums on the semitrailer. These procedures remove and install one complete set.

REMOVAL

1. Remove brake drum (Figure 1, Item 15) and ten wheel studs (Figure 1, Item 4) from hub (Figure 1, Item 3).
2. Remove six screws (Figure 1, Item 14), lockwashers (Figure 1, Item 13), hubcap (Figure 1, Item 12), and gasket (Figure 1, Item 11) from hub (Figure 1, Item 3). Discard lockwashers (Figure 1, Item 13) and gasket (Figure 1, Item 11).
3. Remove keeper arm (Figure 1, Item 10) and locknut (Figure 1, Item 9) from spindle (Figure 1, Item 8). Discard keeper arm (Figure 1, Item 10) and locknut (Figure 1, Item 9). See WP 0049 for spindle nut and keeper replacement.
4. Remove outer cone and rollers (Figure 1, Item 1), inner tapered roller cup (Figure 1, Item 2), hub (Figure 1, Item 3), tapered cup (Figure 1, Item 5), cone and rollers (Figure 1, Item 6), and seal (Figure 1, Item 7). Discard seal (Figure 1, Item 7).

END OF TASK

INSTALLATION

CAUTION

Seal is tool-installed, pressed into hub, and must not be cocked or distorted. Spindle must be clean. Failure to comply may result in equipment damage.

NOTE

Seal (Figure 1, Item 7) is installed in hub. Use of a bushing driver is the best method for installation of seal (Figure 1, Item 7).

1. Install new seal (Figure 1, Item 7), cone and rollers (Figure 1, Item 6), tapered cup (Figure 1, Item 5), hub (Figure 1, Item 3), tapered roller cup (Figure 1, Item 2), and cone and rollers (Figure 1, Item 1) onto spindle (Figure 1, Item 8).
2. Install new locknut (Figure 1, Item 9) and keeper arm (Figure 1, Item 10) onto spindle (Figure 1, Item 8). See WP 0049.

NOTE

Tighten hubcap fasteners to 15 lb-ft (20.3 N•m).

3. Install new gasket (Figure 1, Item 11) and hubcap (Figure 1, Item 12) onto hub (Figure 1, Item 3) using six new lockwashers (Figure 1, Item 13) and screws (Figure 1, Item 14). Gasket (Figure 1, Item 11) should be dry.

WARNING



- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.
- DO NOT get oil on mounting face of brake drum or wheel. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

INSTALLATION - Continued**NOTE**

- All flange nuts and studs (Figure 1, Item 4) have right-hand threads. DO NOT damage threads.
 - Apply two drops of oil between nut and flange.
 - Apply two drops of oil to last two or three threads at end of each stud (Figure 1, Item 4).
 - Using oil, lightly lubricate pilots on hub (Figure 1, Item 3) to ease wheel removal and installation.
4. Seat brake drum (Figure 1, Item 15) onto hub (Figure 1, Item 3) using ten wheel studs (Figure 1, Item 4) as guides.

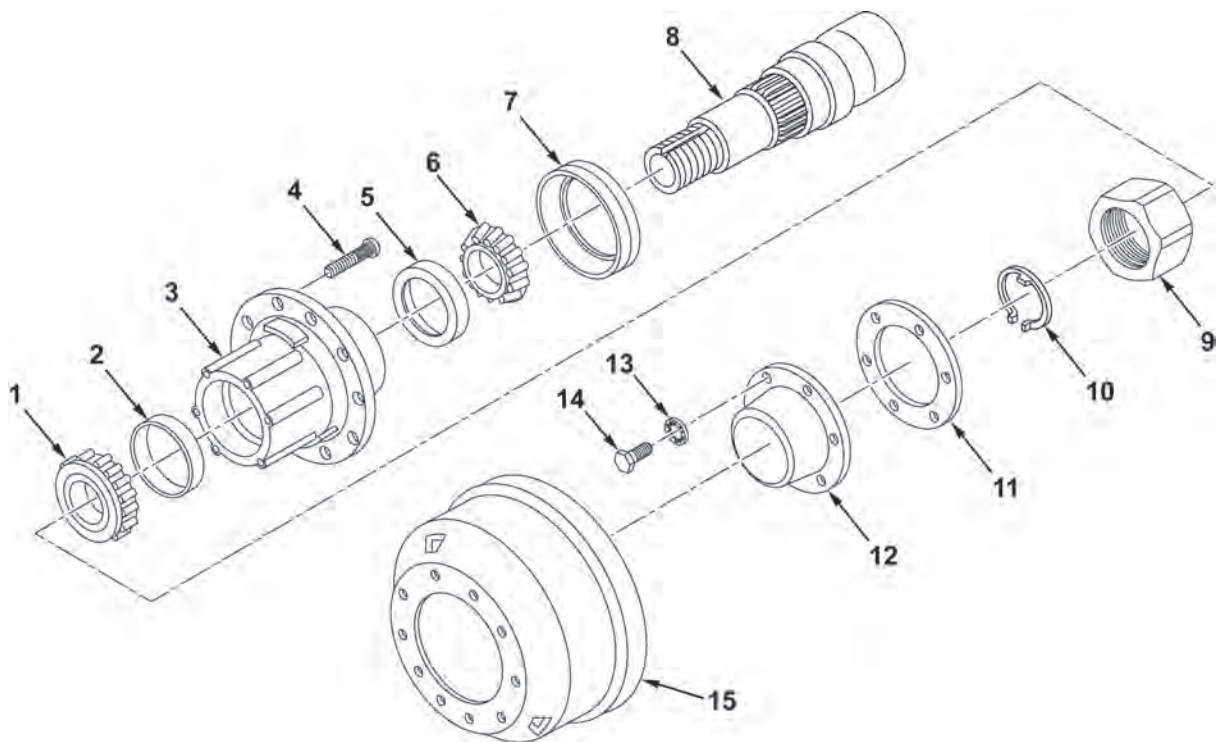


Figure 1. Hub and Drum Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Install tires and wheels (WP 0026).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove ground boards (WP 0005).
5. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
TIRE REPAIR**

INITIAL SETUP:

References

TM 9-2610-200-14

Refer to TM 9-2610-200-14 for instructions on tire maintenance.

END OF WORK PACKAGE

**FIELD MAINTENANCE
FRAME REPAIR**

INITIAL SETUP:

References

TB 9-2510-242-40

Refer to TB 9-2510-242-40 for repair of frame.

END OF WORK PACKAGE

FIELD MAINTENANCE
RETRACTABLE TWISTLOCKS MAINTENANCE (M871R AND M871A1R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Side panels removed (WP 0069)

References

WP 0084
WP 0085

Equipment Condition

Landing legs down (WP 0005)

WARNING

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NOTE

- Ensure retractable twistlock pocket is clean and free of debris.
- Socket cup is welded in. This task is accomplished at Field Maintenance level.
- There are four retractable twistlocks, and they are removed and installed the same way. These procedures cover one retractable twistlock.
- Refer to WP 0084 for additional service requirements.

REMOVAL

1. Lower twistlock.
2. Drive out pin (Figure 1, Item 3) and remove lower assembly (Figure 1, Item 4). Discard pin (Figure 1, Item 3).
3. Remove upper assembly taking care not to separate bayonet (Figure 1, Item 1) and locator block (Figure 1, Item 2).

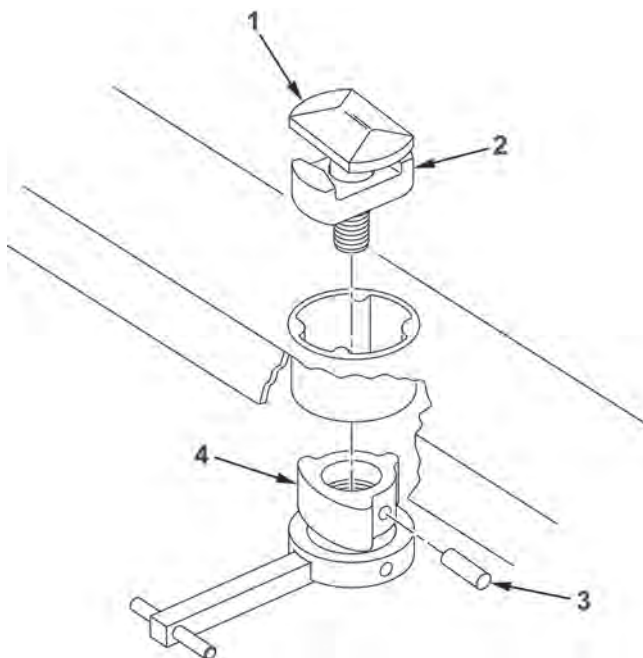


Figure 1. Retractable Twistlock Removal.

END OF TASK

DISASSEMBLY

CAUTION

Carefully separate locator block and bayonet to prevent loss of springs and balls. Failure to comply may result in equipment damage.

1. Remove setscrew (Figure 2, Item 4), spring (Figure 2, Item 3), and ball (Figure 2, Item 2).
2. Separate locator block (Figure 2, Item 5) and bayonet (Figure 2, Item 1).
3. Remove ball (Figure 2, Item 7) and spring (Figure 2, Item 6).

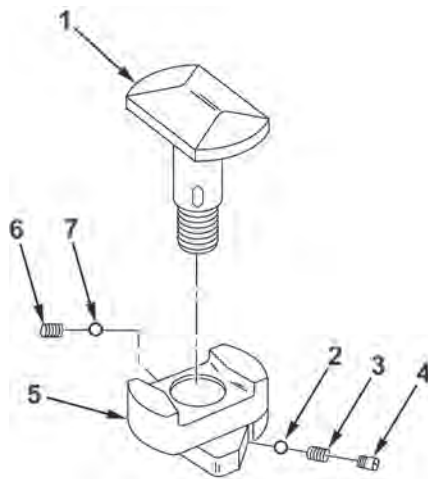
DISASSEMBLY - Continued

Figure 2. Upper Retractable Twistlock Disassembly.

4. Remove and discard pin (Figure 3, Item 2).
5. Remove handle (Figure 3, Item 3) from base cap (Figure 3, Item 1).

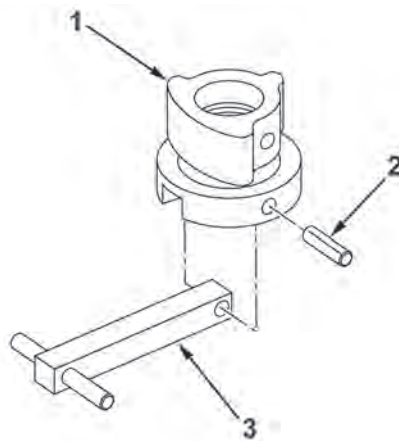


Figure 3. Lower Retractable Twistlock Disassembly.

END OF TASK**REPAIR**

Repair is by replacement of assembly only.

END OF TASK

ASSEMBLY

1. Install handle (Figure 4, Item 3) on base cap (Figure 4, Item 1).
2. Install new pin (Figure 4, Item 2).

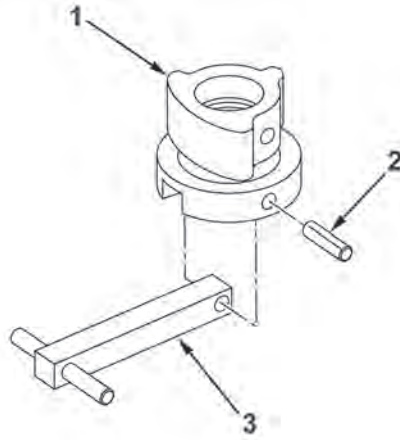


Figure 4. Lower Retractable Twistlock Assembly.

3. Place spring (Figure 5, Item 6) and ball (Figure 5, Item 7) into position.
4. Install locator block (Figure 5, Item 5) to bayonet (Figure 5, Item 1).
5. Install ball (Figure 5, Item 2), spring (Figure 5, Item 3), and setscrew (Figure 5, Item 4).

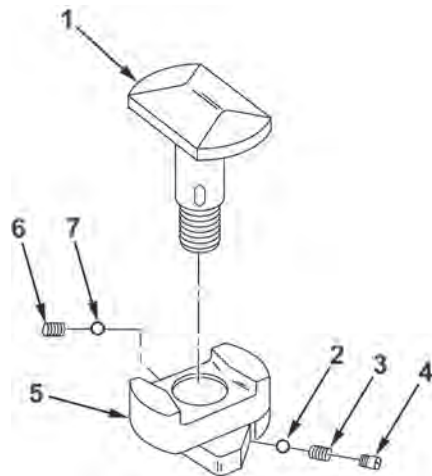


Figure 5. Upper Retractable Twistlock Assembly.

END OF TASK

INSTALLATION

1. Install upper assembly (Figure 6, Item 1).
2. Install lower assembly (Figure 6, Item 3). Turn and align holes for pin (Figure 6, Item 2).
3. Install new pin (Figure 6, Item 2).

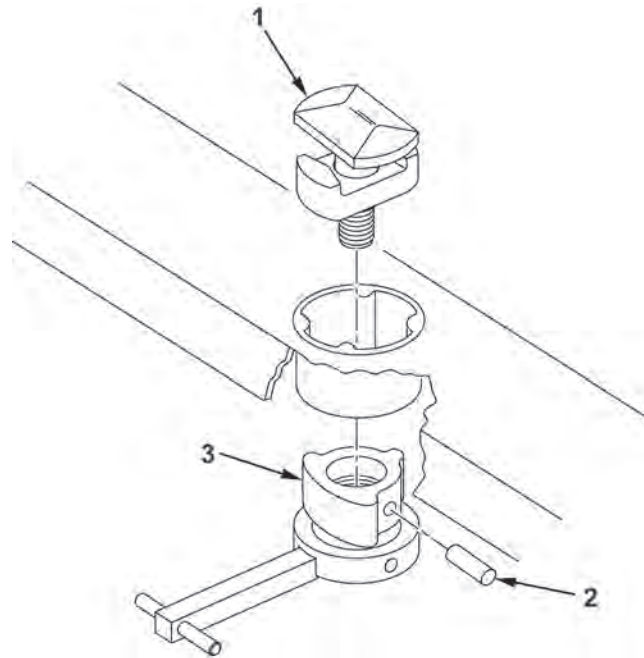


Figure 6. Retractable Twistlock Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Lubricate twistlock with 10 wt. oil (WP 0085).
2. Install side panels (WP 0069).
3. Ensure twistlock operates freely with no binding.
4. Connect semitrailer to prime mover (WP 0005).
5. Raise landing legs (WP 0005).
6. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
RETRACTABLE TWISTLOCKS MAINTENANCE (M871A2R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

WP 0084
WP 0085

Materials/Parts

Handle, Manual Control
(WP 0128, Figure KITS, Item 6)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)
Pin (WP 0108, Figure 19, Item 6)
Twistlock, Cone, Kit
(WP 0128, Figure KITS, Item 5)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Side panels removed (WP 0074)

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

NOTE

- Ensure retractable twistlock pocket is clean and free of debris.
- Socket is welded in. This task is accomplished at Field Maintenance level.
- There are four retractable twistlocks, and they are removed and installed the same way. These procedures cover one retractable twistlock.
- Refer to WP 0084 for additional service requirements.

REMOVAL

1. Remove elastic strap (Figure 1, Item 5) from eye bolt (Figure 1, Item 6). Lower handle (Figure 1, Item 1) to vertical position.
2. Remove elastic strap (Figure 1, Item 5) from handle (Figure 1, Item 1).
3. Lower twistlock (Figure 1, Item 2) in socket (Figure 1, Item 4) to access pin (Figure 1, Item 3).
4. Drive pin (Figure 1, Item 3) from twistlock (Figure 1, Item 2), and remove twistlock (Figure 1, Item 2) from socket (Figure 1, Item 4).
5. Remove nut (Figure 1, Item 8), eye bolt (Figure 1, Item 6), and nut (Figure 1, Item 7).

END OF TASK**INSTALLATION**

1. Install nut (Figure 1, Item 7), eye bolt (Figure 1, Item 6), and nut (Figure 1, Item 8).
2. Install twistlock (Figure 1, Item 2) in socket (Figure 1, Item 4), and drive new pin (Figure 1, Item 3) into twistlock (Figure 1, Item 2).
3. Install elastic strap (Figure 1, Item 5) on handle (Figure 1, Item 1).
4. Lift end of handle (Figure 1, Item 1) and secure elastic strap (Figure 1, Item 5) to eye bolt (Figure 1, Item 6).

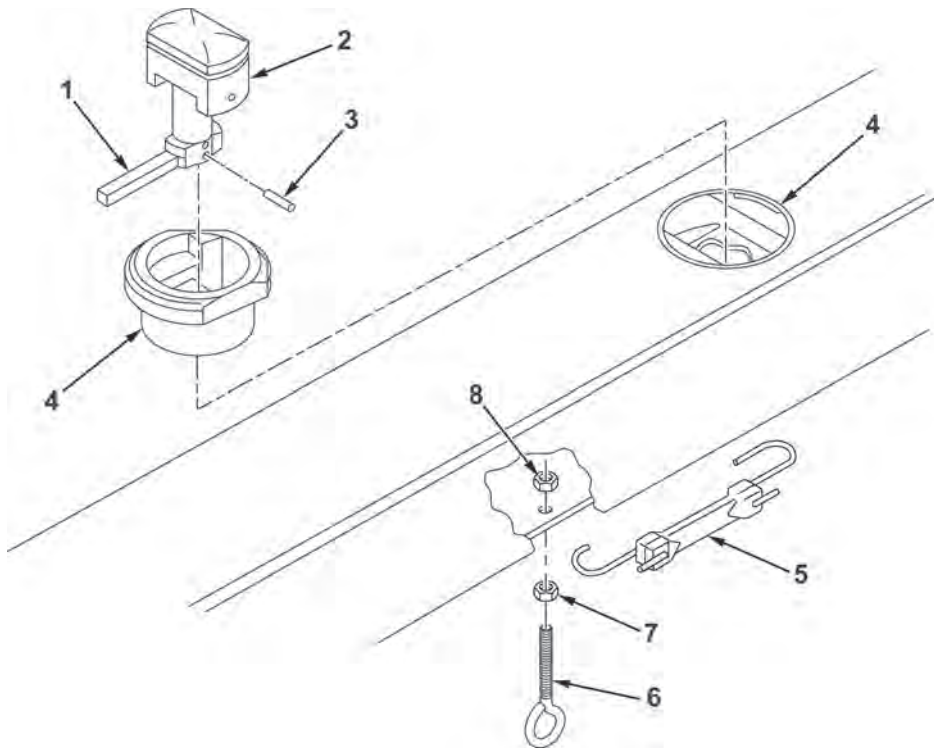


Figure 1. Retractable Twistlock Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Lubricate swing arm with 10 wt. oil (WP 0085).
2. Install side panels (WP 0074).
3. Ensure twistlock operates freely with no binding.
4. Connect semitrailer to prime mover (WP 0005).
5. Raise landing legs (WP 0005).
6. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
TIEDOWN RINGS MAINTENANCE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Drill (WP 0138, Table 1, Item 7)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Locknut Qty: 20 (WP 0109, Figure 20, Item 3)

Equipment Condition

Landing legs down (WP 0005)

NOTE

There are 10 tiedown rings, and they are removed and installed the same way. These procedures cover one tiedown ring.

REMOVAL

Remove two locknuts (Figure 1, Item 5), screws (Figure 1, Item 1), strap (Figure 1, Item 2), and tiedown ring (Figure 1, Item 3) from frame (Figure 1, Item 4). Discard locknuts (Figure 1, Item 5).

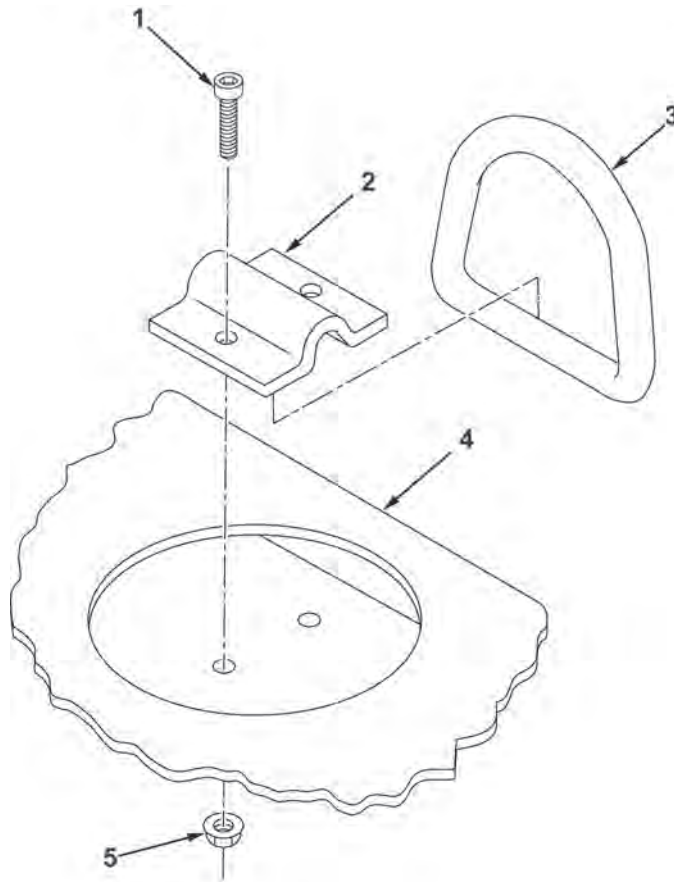


Figure 1. Tiedown Ring Removal.

END OF TASK**MODIFICATION****NOTE**

There are different configurations of the tiedown rings. Check that the strap bolt holes align with the holes in the recessed mounting plate. If the holes do not align, a hole will have to be drilled as shown in Modification in this Work Package (WP). If the holes align, proceed to Installation in this WP.

1. Align new hole center to the centerline of the existing holes (Figure 2, Item 1).
2. Locate new hole center 1.5 in. (38 mm) on the recessed mounting plate toward the outside of the side rail (Figure 2, Item 2).

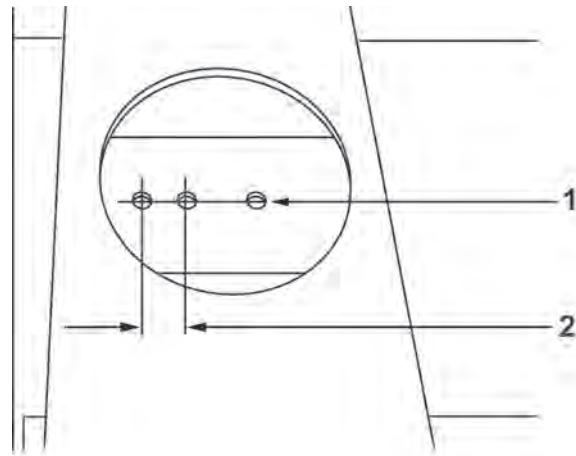
MODIFICATION - Continued

Figure 2. Location of Hole to be Drilled.

WARNING

Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

3. Drill 0.47 in. (11.5 mm) hole (Figure 3, Item 1) in the recessed mounting plate.

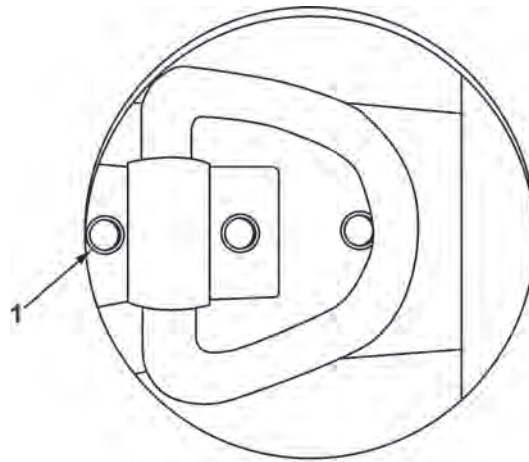


Figure 3. New Hole.

END OF TASK

INSTALLATION**NOTE**

The Original Equipment Manufacturer (OEM) hole (Figure 4, Item 5) in the recessed mounting plate, toward the inside of the side rail, is not used.

Install tiedown ring (Figure 4, Item 2), strap (Figure 4, Item 1), two screws (Figure 4, Item 3), and new locknuts (Figure 4, Item 4) to frame. Tighten locknuts (Figure 4, Item 4) to 20 to 28 lb-ft (27 to 38 N•m).

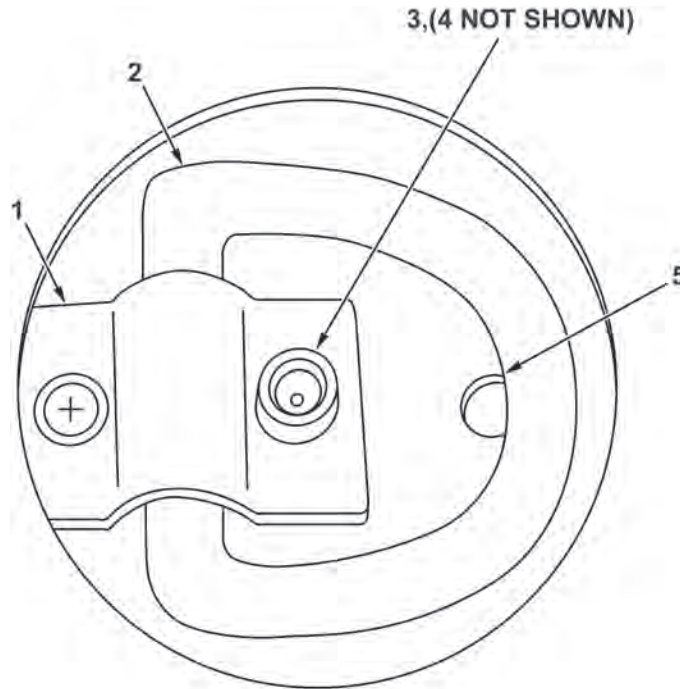


Figure 4. Tiedown Ring Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
LADDER BRACKET REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Locknut Qty: 4 (WP 0109, Figure 20, Item 9)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Ladder removed

Equipment Condition

Landing legs down (WP 0005)

REMOVAL

Remove four locknuts (Figure 1, Item 3), bolts (Figure 1, Item 1), eight washers (Figure 1, Item 2), and bracket (Figure 1, Item 4). Discard locknuts (Figure 1, Item 3).

END OF TASK**INSTALLATION**

Install bracket (Figure 1, Item 4), eight washers (Figure 1, Item 2), four bolts (Figure 1, Item 1), and new locknuts (Figure 1, Item 3).

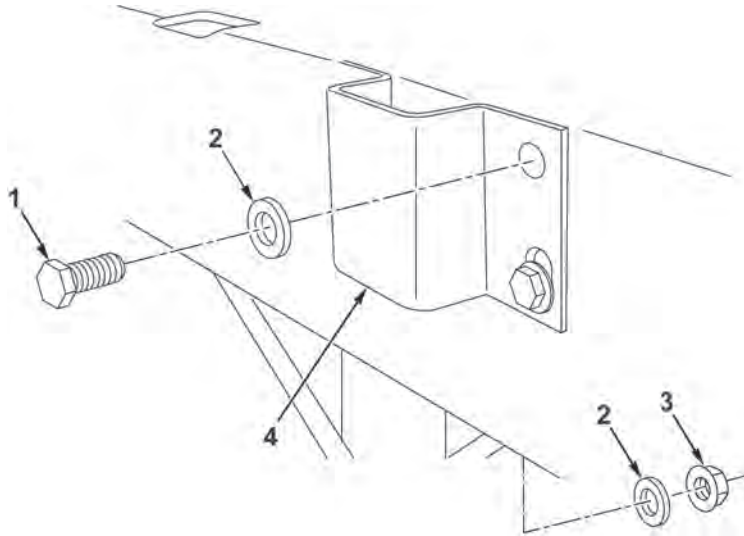


Figure 1. Ladder Bracket Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Install ladder.
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
SPARE TIRE CARRIER MAINTENANCE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Lockwasher Qty: 12 (WP 0110, Figure 21, Item 2)
Locknut Qty: 12 (WP 0110, Figure 21, Item 1)
Locknut Qty: 3 (WP 0110, Figure 21, Item 8)

Personnel Required

(2)

Equipment Condition

Landing legs down (WP 0005)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Spare tire removed (WP 0027)

NOTE

Some carriers may be welded to frame instead of bolted.

REMOVAL

1. Support spare tire carrier (Figure 1, Item 12).
2. At inside bracket (Figure 1, Item 3), remove four locknuts (Figure 1, Item 1), lockwashers (Figure 1, Item 2), screws (Figure 1, Item 5), and washers (Figure 1, Item 4). Discard lockwashers (Figure 1, Item 2) and locknuts (Figure 1, Item 1).
3. At two outside brackets (Figure 1, Item 9), remove four locknuts (Figure 1, Item 10), lockwashers (Figure 1, Item 11), screws (Figure 1, Item 8), washers (Figure 1, Item 7), and spare tire carrier (Figure 1, Item 12). Discard lockwashers (Figure 1, Item 11) and locknuts (Figure 1, Item 10).

END OF TASK**DISASSEMBLY**

1. Remove chain (Figure 1, Item 6) from spare tire carrier (Figure 1, Item 12).
2. Remove three locknuts (Figure 1, Item 14) and screws (Figure 1, Item 13) and separate sections of spare tire carrier (Figure 1, Item 12). Discard locknuts (Figure 1, Item 14).

END OF TASK**REPAIR**

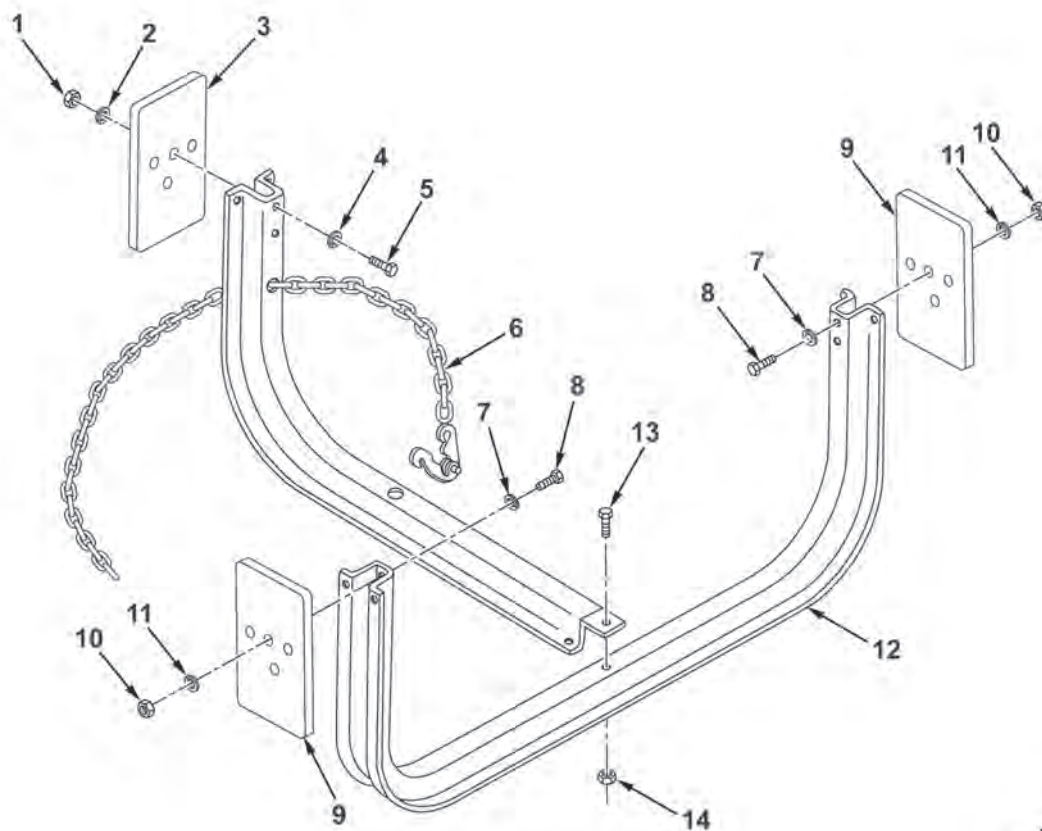
Repair is limited to replacement of chain (Figure 1, Item 6).

END OF TASK**ASSEMBLY**

1. Connect sections of spare tire carrier (Figure 1, Item 12) and install three screws (Figure 1, Item 13) and new locknuts (Figure 1, Item 14).
2. Install chain (Figure 1, Item 6) in spare tire carrier (Figure 1, Item 12).

END OF TASK**INSTALLATION**

1. Position and support spare tire carrier (Figure 1, Item 12).
2. At two outside brackets (Figure 1, Item 9), install four washers (Figure 1, Item 7), screws (Figure 1, Item 8), new lockwashers (Figure 1, Item 11), and new locknuts (Figure 1, Item 10).
3. At inside bracket (Figure 1, Item 3), install four washers (Figure 1, Item 4), screws (Figure 1, Item 5), new lockwashers (Figure 1, Item 2), and new locknuts (Figure 1, Item 1).

INSTALLATION - Continued

RE0012A

Figure 1. Spare Tire Carrier Maintenance.

END OF TASK**FOLLOW-ON TASKS**

1. Install spare tire (WP 0027).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
KINGPIN INSPECTION**

INITIAL SETUP:**Tools and Special Tools**

Gage, Profile, Kingpin (WP 0138, Table 1, Item 9)
Straightedge, 48 in. (WP 0138, Table 1, Item 21)

Equipment Condition (cont.)

Parking brake set (WP 0005)
Wheels chocked (WP 0005)

Materials/Parts

Grease, Automotive and Artillery
(WP 0137, Table 1, Item 19)

References

WP 0059
WP 0060

Equipment Condition

Vehicle parked on level surface (WP 0005)

INSPECTION

Inspection of the trailer bolster plate and kingpin is just as important as the inspection of its mating component, the fifth wheel. They should be inspected every six months to ensure proper and safe kingpin/fifth wheel coupling.

1. **Upper Coupler Plate Flatness.** Use a 48 in. (122 cm) straightedge to check the flatness in all directions. Any bumps, valleys, or warping will cause uneven loading of the fifth wheel, which could result in damage to the bolster plate and poor lock life. Replace the trailer bolster plate if flatness exceeds the specifications shown in Figure 1.
2. **Inspect the Kingpin for Straightness.** Use a kingpin gauge to see if the kingpin is bent. A bent kingpin accelerates lock wear and may interfere with proper fifth wheel locking. This also may indicate damage. The kingpin should be replaced (WP 0059 or WP 0060) if it exceeds one degree from square in any direction (Figure 1).

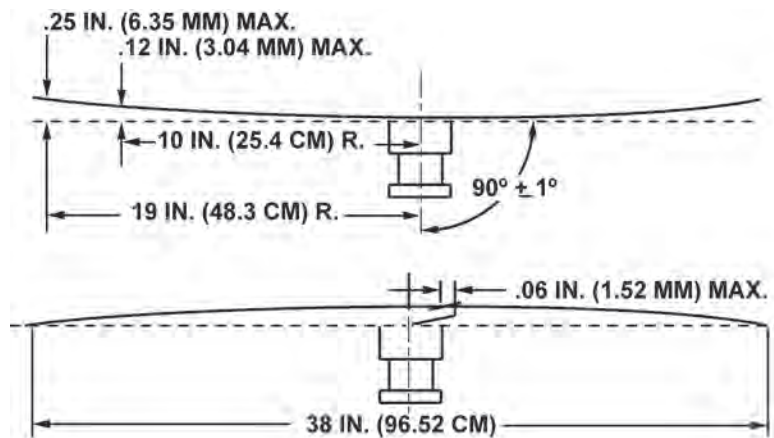


Figure 1. Kingpin Straightness.

3. **Inspect the Kingpin for Proper Length.** Use kingpin gauge to check the length as shown in Figure 2.

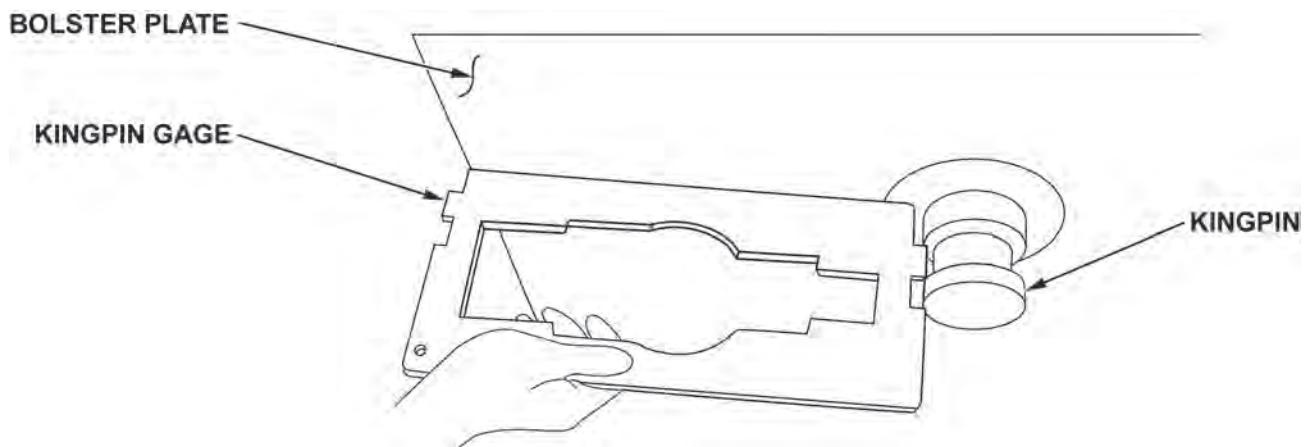


Figure 2. Proper Kingpin Length.

INSPECTION - Continued

4. **Inspect the Kingpin for Wear.** Use a kingpin gauge to check the wear on both the 2 in. and 2.88 in. (5.1 cm and 7.3 cm) diameters. Wear of 0.13 in. (3.3 mm) is indicated if the appropriate diameter enters the gauge slot. Replace the kingpin (WP 0059 or WP 0060) if the gauge slides into the appropriate gauge slot (see Figure 3).

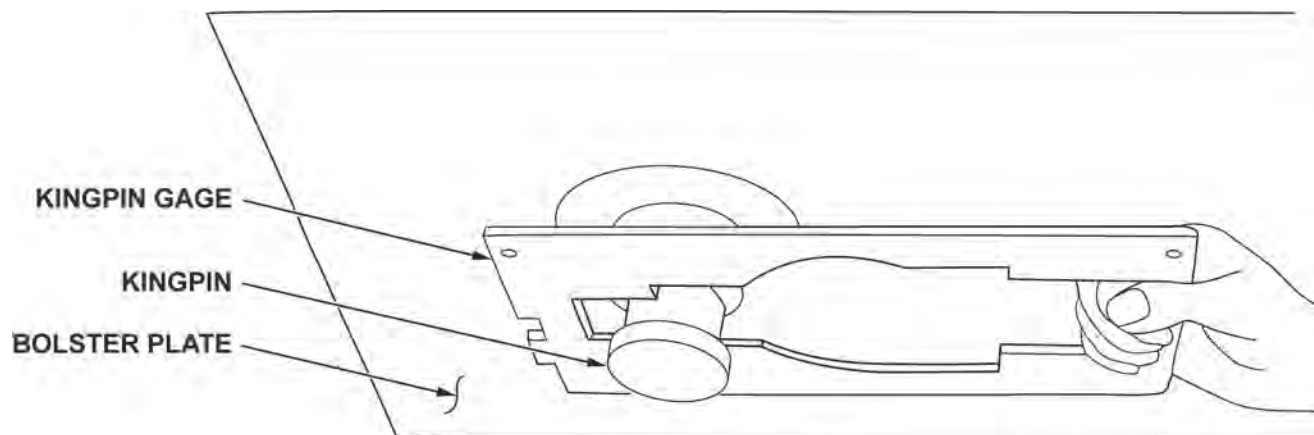


Figure 3. Kingpin Wear.

5. **Check the Kingpin Mounting.** In addition to being a safety hazard, a loose mounting will cause excessive chucking and rapid lock wear. Reinstall or replace any kingpin (WP 0059 or WP 0060) which is not securely mounted.
6. **Check the Kingpin for Damage.** Inspect the kingpin for any nicks, gouges, deformation, or cracks which may interfere or affect the safe use of the kingpin. Replace the kingpin (WP 0059 or WP 0060) if any damage is noted.

WARNING

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7. Apply grease to upper bolster plate and kingpin per WP 0085.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
KINGPIN REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Apron (WP 0138, Table 1, Item 1)
Cutting Torch (WP 0138, Table 1, Item 5)
Gage, Profile, Kingpin (WP 0138, Table 1, Item 9)
Gloves (WP 0138, Table 1, Item 10)
Grinder (WP 0138, Table 1, Item 11)
Plasma Cutter (WP 0138, Table 1, Item 15)
Welder, MIG (WP 0138, Table 1, Item 28)
Welding Mask (WP 0138, Table 1, Item 29)

References (cont.)

MIL-E-23765/2
TACOM Welding Drawing 12479550
WP 0058

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Kingpin, Fifth Wheel
(WP 0111, Figure 22, Item 1)

Personnel Required

(2)

References

MIL-E-22200/10

REMOVAL

1. Remove middle metal plate to gain access to top surface of kingpin (Figure 1, Item 1).

WARNING

- Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. To prevent injury, user must wear eye protection or face shield. Ensure air stream is directed away from user and other personnel in the area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
2. Use air-arc process to remove welds securing kingpin (Figure 1, Item 1) upper surface and to remove plug welds from kingpin (Figure 1, Item 1) 5.5 in. (14 cm) square base. A 300 amp welder is required along with "shop air" supply of 90 psi (621 kPa). Care must be taken to minimize damage to bolster plate.
 3. Remove kingpin (Figure 1, Item 1). Damage to kingpin (Figure 1, Item 1) being removed is of no consequence.

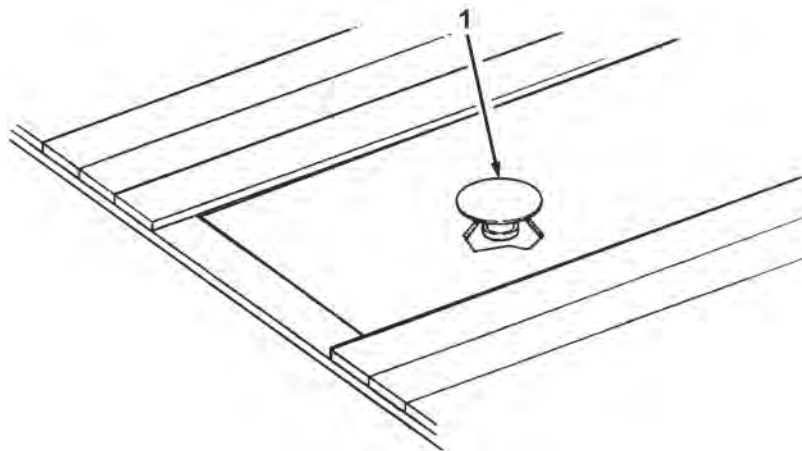


Figure 1. Kingpin Removal.

END OF TASK

INSTALLATION

WARNING



- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
1. Grind area of bolster plate under kingpin (Figure 2, Item 1) 5.5 in. (14 cm) square base flush so that new kingpin (Figure 2, Item 1) will lay flat on bolster plate.
 2. Install new kingpin (Figure 2, Item 1). Locate holes in kingpin (Figure 2, Item 1) top in same manner as kingpin removed.
 3. Preheat kingpin (Figure 2, Item 1) and bolster plate to 150 °F (66 °C), and maintain temperature throughout welding process.
 4. Once kingpin (Figure 2, Item 1) is in desired position, tack-weld kingpin (Figure 2, Item 1) in place to prevent movement.
 5. Use kingpin gauge to ensure kingpin (Figure 2, Item 1) is in proper position (WP 0058).

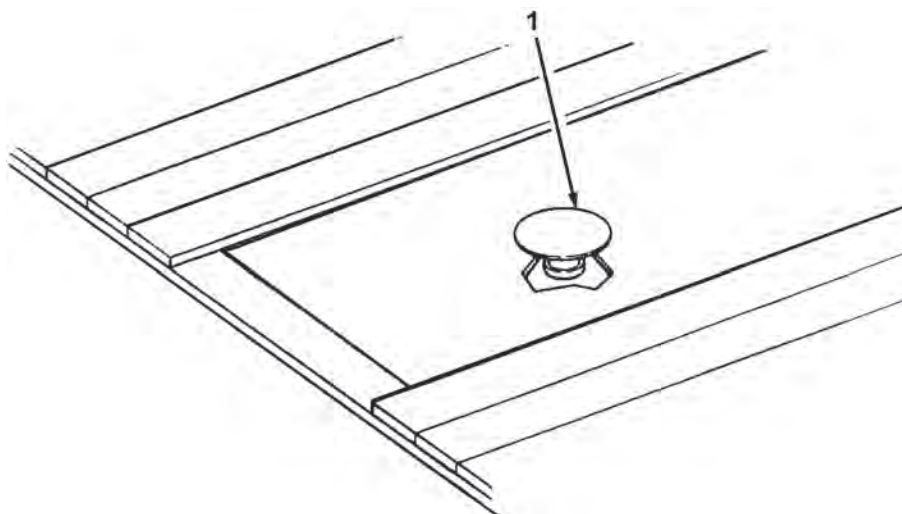


Figure 2. Kingpin Installation.

INSTALLATION - Continued**WARNING**

- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

CAUTION

Ensure that kingpin is adequately braced to support the loads to be applied. Failure to comply may result in equipment damage.

6. Weld kingpin 5.5 in. (14 cm) square base to bolster plate (Figure 3) with 0.25 in. (6.35 mm) fillet weld 2 in. (5.1 cm) long at four equally spaced points on edge of flange, and plug weld holes in 5.5 in. (14 cm) square base. Welds are to be in accordance with TACOM Welding Drawing 12479550. Use 100,000 psi (689,475 kPa) electrode or wire of following specifications:
 - Electrodes – mineral coated, low hydrogen, MIL-E-22200/10, type MIL-10015 or MIL-10016
 - Wire – bare solid, low alloy steel, MIL-E-23765/2, type 100S-1, 100S-2, or 110S-1

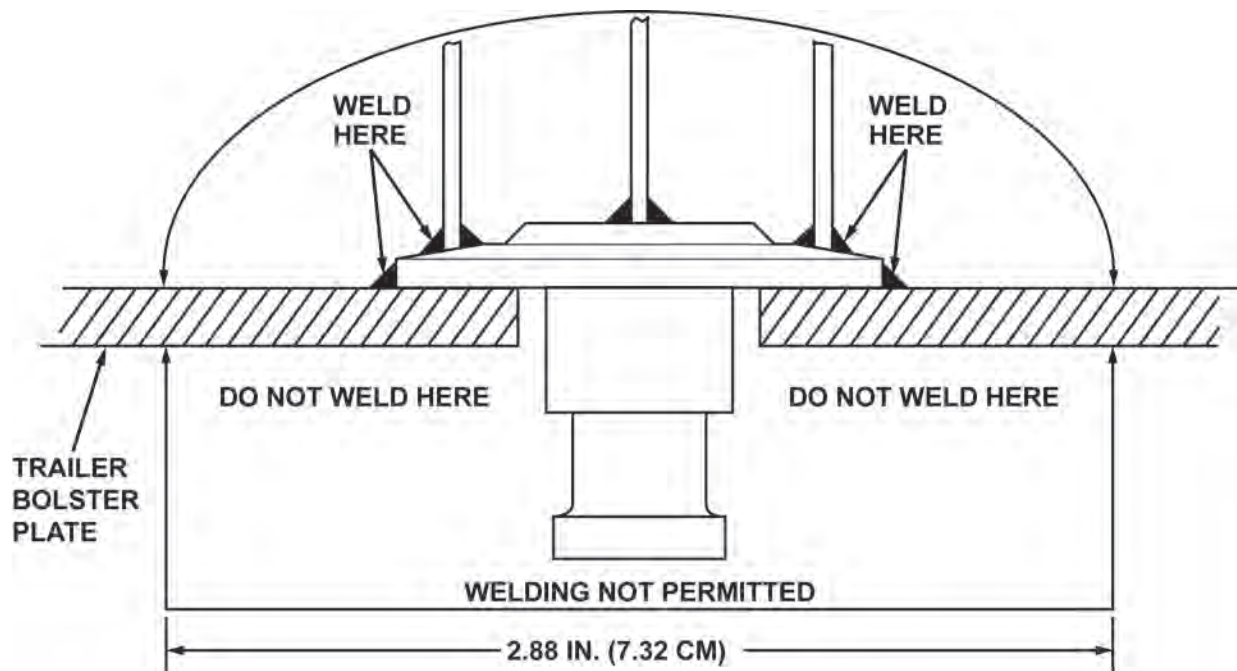
INSTALLATION - Continued

Figure 3. Kingpin Weld Points.

7. Replace middle metal plate that was removed to gain access to top.

END OF TASK**FOLLOW-ON TASKS**

1. Inspect kingpin (WP 0058).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE KINGPIN REPLACEMENT (M871A2R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Apron (WP 0138, Table 1, Item 1)
Cutting Torch (WP 0138, Table 1, Item 5)
Gage, Profile, Kingpin
(WP 0138, Table 1, Item 9)
Gloves (WP 0138, Table 1, Item 10)
Grinder (WP 0138, Table 1, Item 11)
Plasma Cutter (WP 0138, Table 1, Item 15)
Straightedge, 48 in. (122 cm)
(WP 0138, Table 1, Item 21)
Welder, MIG (WP 0138, Table 1, Item 28)
Welding Mask (WP 0138, Table 1, Item 29)

Materials/Parts

Kingpin, Fifth Wheel
(WP 0111, Figure 22, Item 1)

Personnel Required

(2)

References

MIL-E-22200/10
MIL-E-23765/2
TACOM Welding Drawing 12479550
WP 0058

Equipment Condition

Semitrailer disconnected from prime mover
(WP 0005)
Landing legs down (WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

REMOVAL

WARNING



- Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. To prevent injury, user must wear eye protection or face shield. Ensure air stream is directed away from user and other personnel in the area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL - Continued

1. Measure from floor side of bulkhead (Figure 1, Item 5), and mark two straight lines on top metal plate (Figure 1, Item 2) between main beams (Figure 1, Item 1) at locations shown.
2. Use air-arc process to make two straight cuts in top metal plate (Figure 1, Item 2) between main beams (Figure 1, Item 1) at locations marked.
3. Air-arc existing welds securing metal plate (Figure 1, Item 2) to the main beams (Figure 1, Item 1).
4. Remove cutout section of metal plate (Figure 1, Item 2) to gain access to top of kingpin (Figure 1, Item 3).
5. Use air-arc process to remove welds securing kingpin (Figure 1, Item 3) 8-in. (20-cm) round base to bolster plate (Figure 1, Item 4). 300-amp welder is required along with shop air supply of 90 psi (621 kPa). Care must be taken to minimize damage to bolster plate.
6. Remove and discard kingpin (Figure 1, Item 3).

END OF TASK**INSTALLATION****WARNING**

- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
1. Grind area of bolster plate (Figure 1, Item 4) under kingpin (Figure 1, Item 3) 8-in. (20-cm) round base flush so that new kingpin (Figure 1, Item 3) will lay flat on bolster plate (Figure 1, Item 4).
 2. Position new kingpin (Figure 1, Item 3) on bolster plate (Figure 1, Item 4).
 3. Drop plumb line and bob from kingpin (Figure 1, Item 3) to ground, and mark spot with chalk (Figure 2).

INSTALLATION - Continued

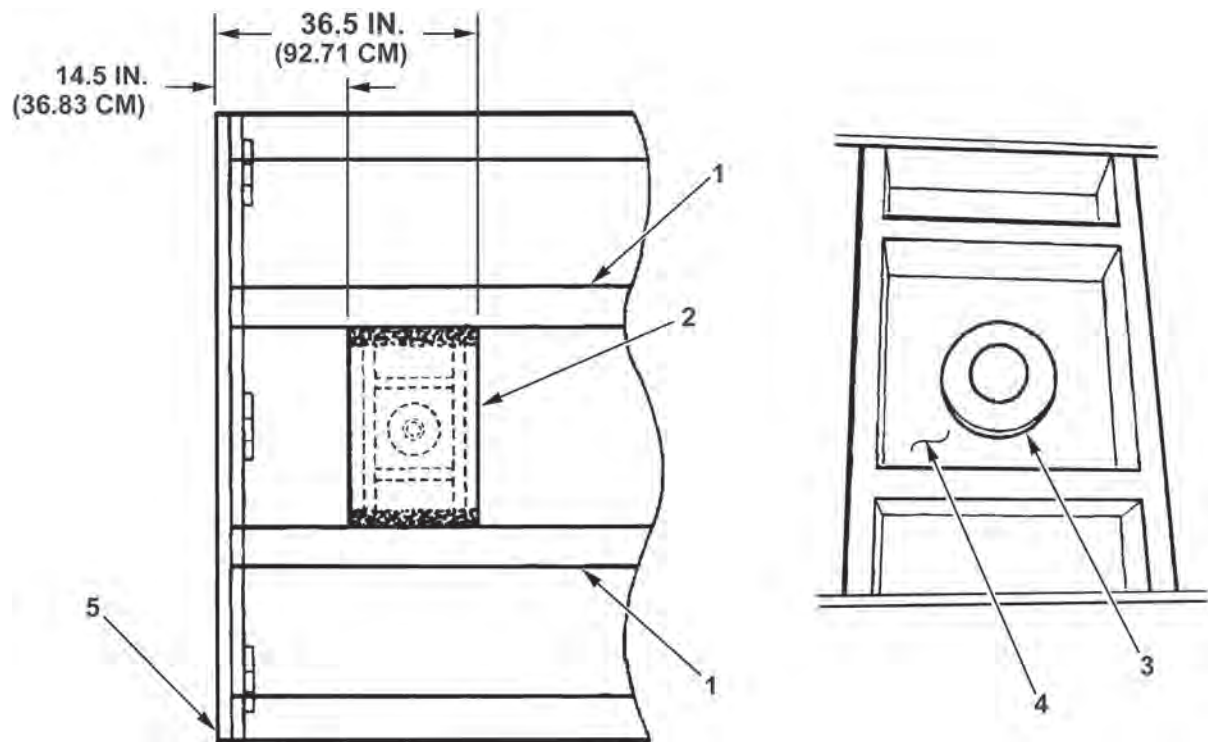


Figure 1. Kingpin Removal and Installation.

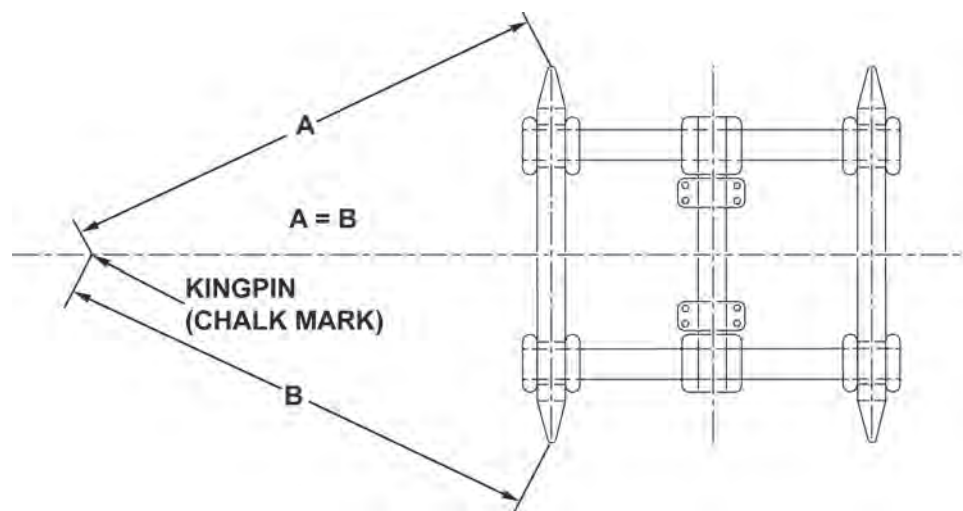


Figure 2. Kingpin Centering — Chalk Mark.

INSTALLATION - Continued

4. To center kingpin (Figure 3, Item 1), measure distance from chalk mark to center of hub cap plugs on front axle (Figure 2, A and B). Difference between measurements should be no more than 0.37 in. (0.94 cm).
5. If measurements are not correct, adjust kingpin (Figure 3, Item 1) on bolster plate (Figure 3, Item 2) until measurements are within limits.

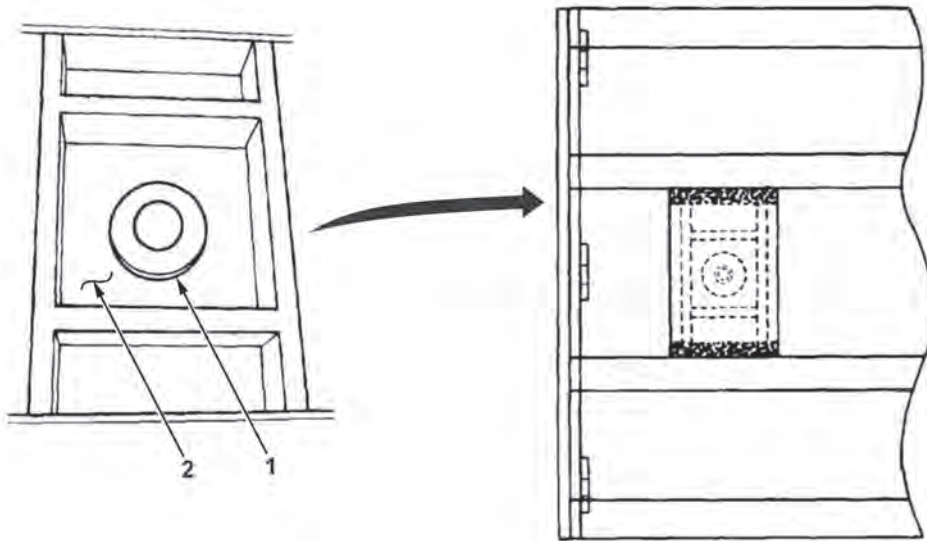


Figure 3. Kingpin Centering.

WARNING

- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Never weld, grind, or use a cutting torch on Chemical Agent Resistant Coating (CARC) or Water Dispersible (WD) CARC-painted material without using air-line or air purifying respirators. Welding, grinding, or cutting painted surfaces releases toxic gases, vapors, and metal fumes that may cause skin or respiratory irritation. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

CAUTION

Ensure that the kingpin is adequately braced to support the loads to be applied. Failure to comply may result in equipment damage.

INSTALLATION - Continued

6. Weld kingpin 8-in. (20-cm) round base to bolster plate (Figure 4) with continuous 0.63-in. (1.60-cm) fillet weld. Welds are to be in accordance with TACOM Welding Drawing 12479550. Use 70,000-psi (482,633-kPa) electrode or wire with following specifications:
- Electrodes – mineral coated, low hydrogen, MIL-E-22200/10, type MIL-10015 or MIL-10016
 - Wire – bare solid, low alloy steel, MIL-E-23765/2, type 100S-1, 100S-2, or 110S-1

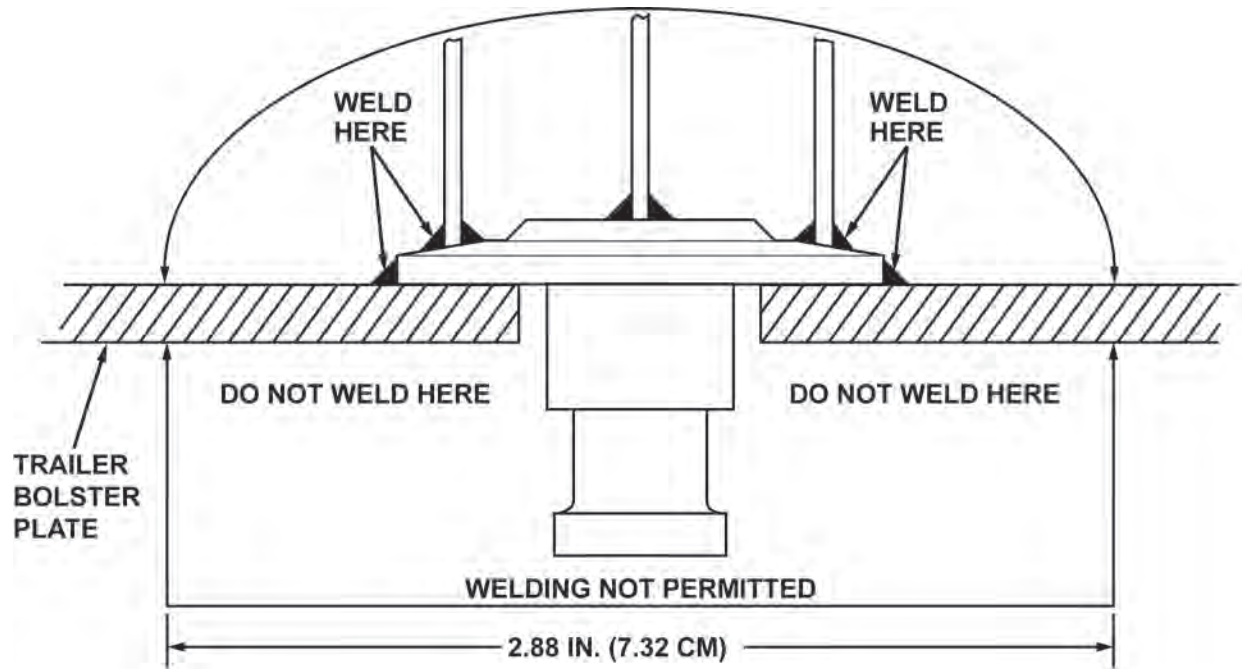


Figure 4. Kingpin Weld Points.

INSTALLATION - Continued

7. Repeat Step 6 two times to obtain continuous three-pass weld on kingpin (Figure 5, Item 1).
8. Weld into place top metal plate (Figure 5, Item 2) that was removed to gain access to kingpin (Figure 5, Item 1).

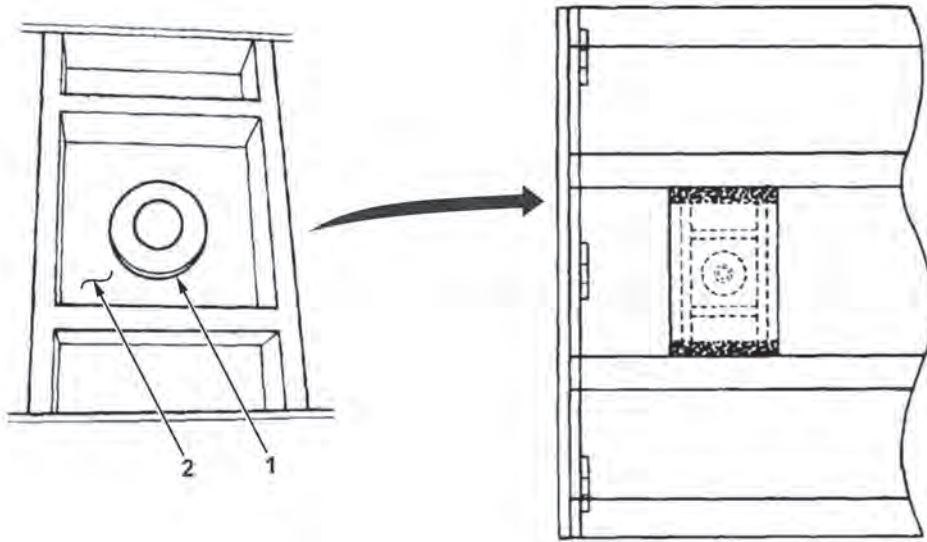


Figure 5. Kingpin Centering.

END OF TASK**FOLLOW-ON TASKS**

1. Inspect kingpin (WP 0058).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
LANDING LEGS MAINTENANCE

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Riveter Kit, Blind (WP 0138, Table 1, Item 17)
Suitable Lifting Device, 300 lb (136.08 kg)
Capacity (WP 0138, Table 1, Item 22)

Personnel Required

(2)

References

WP 0085

Equipment Condition

Semitrailer connected to prime mover (WP 0005)
Semitrailer blocked on jack stands
Wheels chocked (WP 0005)

Materials/Parts

Blind Rivet Qty: 4 (WP 0112, Figure 23, Item 16)
Locknut Qty: 5 (WP 0112, Figure 23, Item 7)
Locknut Qty: 4 (WP 0112, Figure 23, Item 20)
Locknut Qty: 20 (WP 0112, Figure 23, Item 21)
Locknut Qty: 8 (WP 0112, Figure 23, Item 23)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)

WARNING

- Landing gear weighs 200 lb (91 kg). Use two personnel to replace landing gear. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

REMOVAL**NOTE**

Step 1 applies only to the M871R and M871A1R semitrailers.

1. Remove four locknuts (Figure 1, Item 5), eight washers (Figure 1, Item 3), four screws (Figure 1, Item 4), and two brackets (Figure 1, Item 2) from landing leg (Figure 1, Item 1) and semitrailer. Repeat for opposite side of semitrailer. Discard locknuts (Figure 1, Item 5).

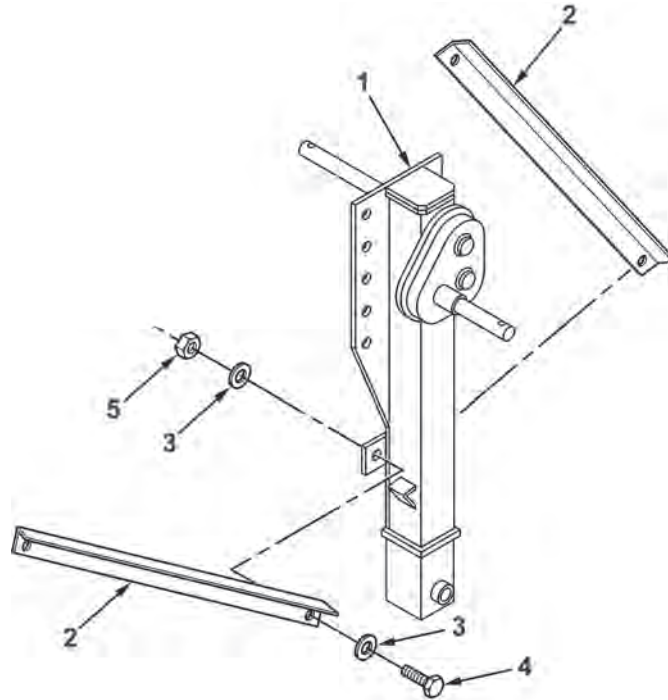


Figure 1. Bracket Removal (M871R and M871A1R Only).

2. Remove bolt (Figure 2, Item 3) and locknut (Figure 2, Item 20) from cross drive shaft (Figure 2, Item 4).
3. Remove 10 bolts (Figure 2, Item 25) and locknuts (Figure 2, Item 21) from landing leg upper bracket (Figure 2, Item 2). Discard locknuts (Figure 2, Item 21)

NOTE

Steps 4 and 5 apply only to the M871A2R semitrailer.

4. Remove two bolts (Figure 2, Item 24) and locknuts (Figure 2, Item 23) from landing leg lower bracket (Figure 2, Item 22) and semitrailer. Remove landing leg (Figure 2, Item 1) from semitrailer. Discard locknuts (Figure 2, Item 23).
5. Remove hex screw (Figure 2, Item 19), locknut (Figure 2, Item 18), and pin (Figure 2, Item 9) from landing leg. Discard locknut (Figure 2, Item 18).
6. Remove two retaining pins (Figure 2, Item 17), washers (Figure 2, Item 16), ties (Figure 2, Item 11), pins (Figure 2, Item 12), front shoe assembly (Figure 2, Item 10), and rear shoe assembly (Figure 2, Item 15) from landing leg (Figure 2, Item 1).

REMOVAL - Continued

7. Remove two blind rivets (Figure 2, Item 14) and lanyards (Figure 2, Item 13) from landing legs (Figure 2, Item 1). Discard blind rivets (Figure 2, Item 14).
8. Repeat Steps 1 through 7 for remaining landing leg (Figure 2, Item 1).
9. Remove bolt (Figure 2, Item 5), two washers (Figure 2, Item 6), and locknut (Figure 2, Item 8) from landing leg hand crank (Figure 2, Item 7), and remove hand crank (Figure 2, Item 7). Discard locknut (Figure 2, Item 8).

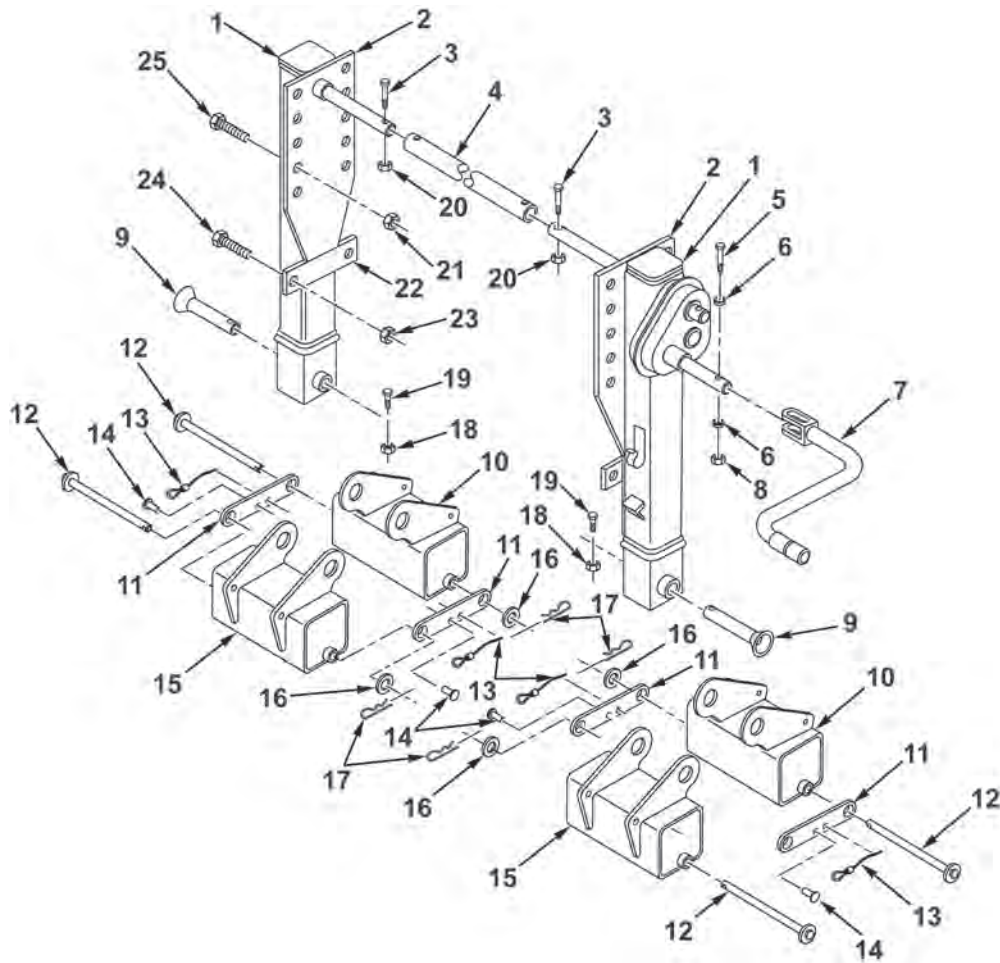


Figure 2. Landing Legs Removal.

END OF TASK

INSTALLATION

1. Install two lanyards (Figure 3, Item 13) onto landing legs (Figure 3, Item 1) using two new blind rivets (Figure 3, Item 14).
2. Install front shoe assembly (Figure 3, Item 10) on rear shoe assembly (Figure 3, Item 15) using two retaining pins (Figure 3, Item 17), washers (Figure 3, Item 16), ties (Figure 3, Item 11), and pins (Figure 3, Item 12).
3. Install landing leg upper bracket (Figure 3, Item 2) using 10 bolts (Figure 3, Item 25) and new locknuts (Figure 3, Item 21).

NOTE

Steps 4 and 5 apply only to the M871A2R semitrailer.

4. Install shoe assemblies (Figure 3, Items 10 and 15) on landing leg (Figure 3, Item 1) using pin (Figure 3, Item 9), hex screw (Figure 3, Item 19), and new locknut (Figure 3, Item 18).
5. Install landing leg lower bracket (Figure 3, Item 22) using two bolts (Figure 3, Item 24) and new locknuts (Figure 3, Item 23).
6. Install landing leg (Figure 3, Item 1) onto cross drive shaft (Figure 3, Item 4) using bolt (Figure 3, Item 3) and new locknut (Figure 3, Item 20).
7. Repeat Steps 1 through 6 for remaining landing leg (Figure 3, Item 1).
8. Install landing leg crank (Figure 3, Item 7) onto landing leg (Figure 3, Item 1) using bolt (Figure 3, Item 5), two washers (Figure 3, Item 6), and new locknut (Figure 3, Item 8).

INSTALLATION - Continued

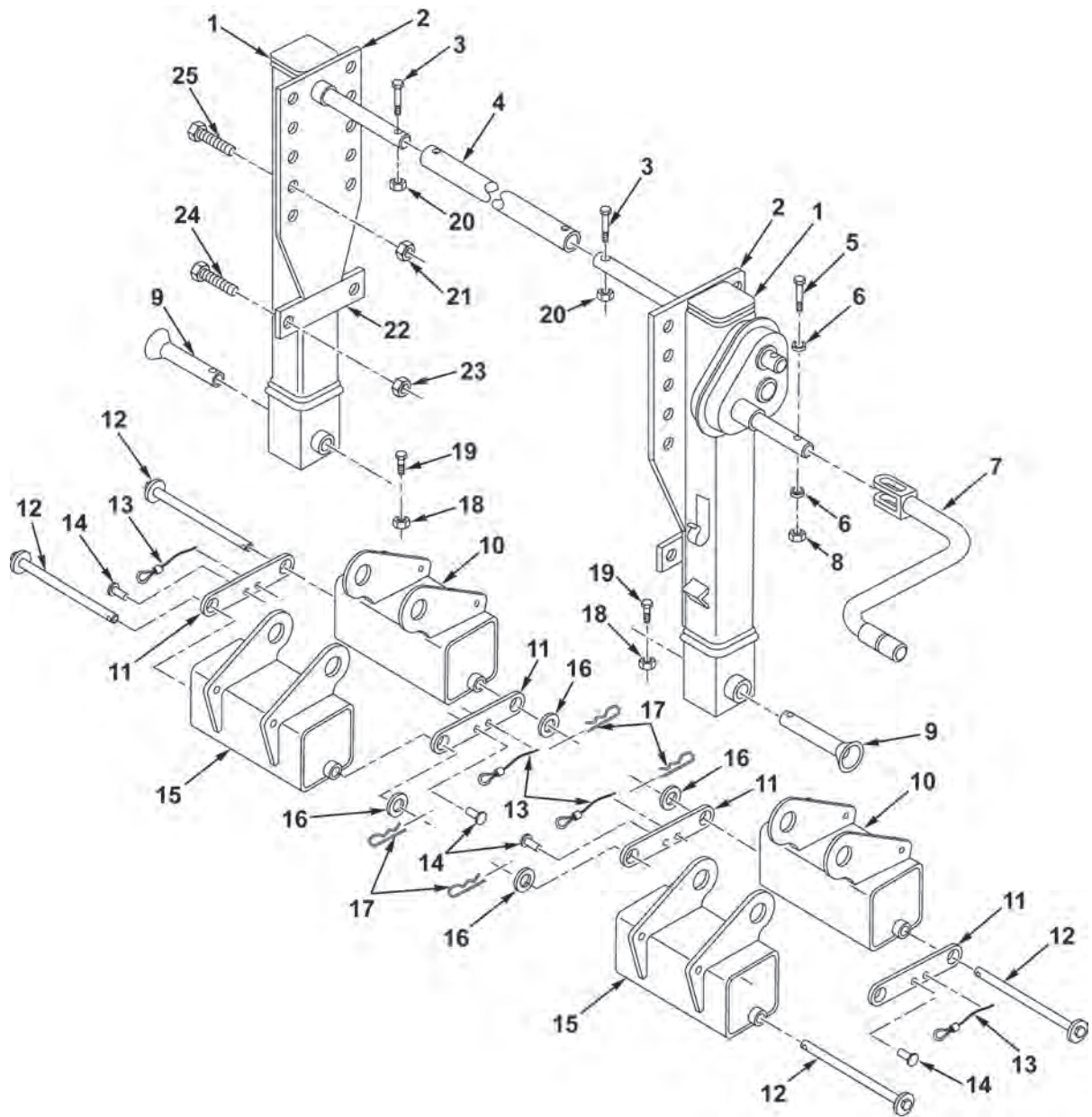


Figure 3. Landing Legs Installation.

INSTALLATION - Continued**NOTE**

Step 9 applies only to the M871R and M871A1R semitrailers.

9. Install two brackets (Figure 4, Item 2), four screws (Figure 4, Item 4), eight washers (Figure 4, Item 3), and four new locknuts (Figure 4, Item 5) on landing leg (Figure 4, Item 1) and semitrailer. Repeat for the opposite side of the semitrailer.

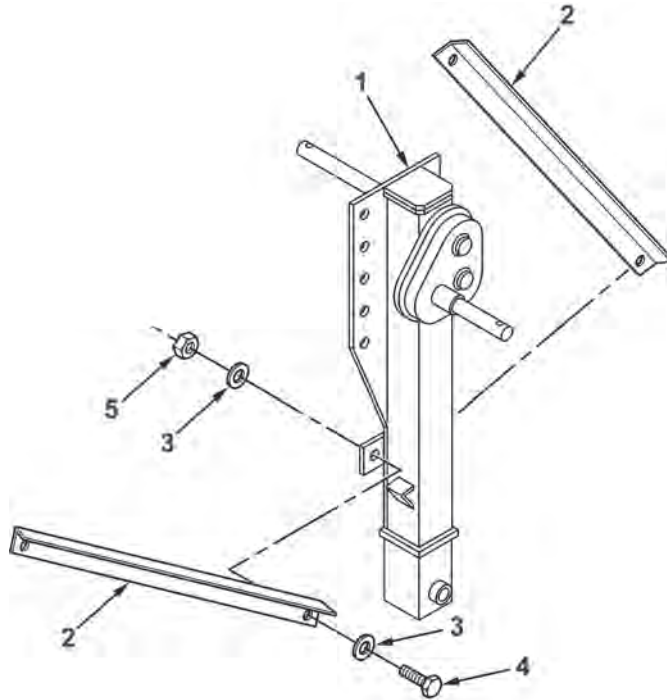


Figure 4. Bracket Installation (M871R and M871A1R Only).

END OF TASK**FOLLOW-ON TASKS**

1. Lubricate with 10 wt. oil (WP 0085).
2. Retract/extend landing legs to ensure smooth operation.
3. Remove jack stands.
4. Raise landing legs (WP 0005).
5. Remove and store chock blocks (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE GROUND BOARDS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)

Equipment Condition

Landing legs down (WP 0005)

WARNING



Watch hands and fingers when removing and installing ground boards. Hands and fingers may be pinched or cut. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

There are two ground boards and they are removed and installed the same way. These procedures cover one ground board.

REMOVAL

1. Remove two retaining pins (Figure 1, Item 2), washers (Figure 1, Item 3), and one straight pin (Figure 1, Item 4) from semitrailer bracket.
2. Remove clip (Figure 1, Item 5) and chain link (Figure 1, Item 6) from chain, and remove ground board (Figure 1, Item 1) from semitrailer.

END OF TASK**INSTALLATION**

1. Install ground board (Figure 1, Item 1) onto semitrailer, and install clip (Figure 1, Item 5) and chain link (Figure 1, Item 6).
2. Install two retaining pins (Figure 1, Item 2), washers (Figure 1, Item 3), and one straight pin (Figure 1, Item 4) on semitrailer bracket.
3. Secure ground board (Figure 1, Item 1) using clip (Figure 1, Item 5) to take up slack in chain. Pull on handle to ensure ground board will not slide out during operation.

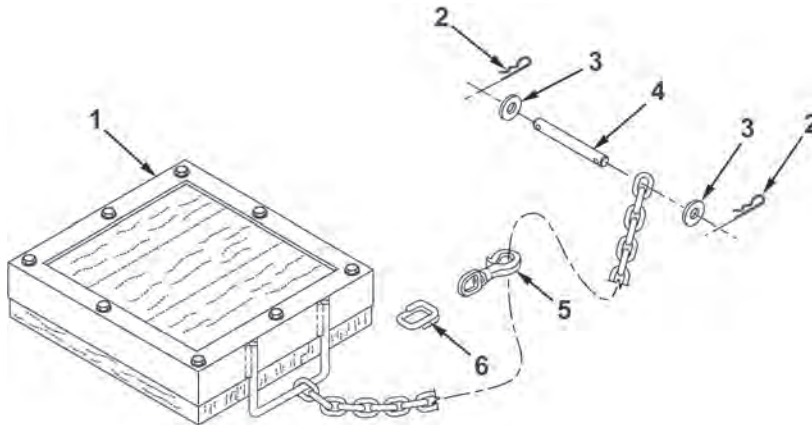


Figure 1. Ground Board Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Remove chock blocks (WP 0005).
3. Raise landing legs (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
WHEEL CHOCKS REPAIR**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition

Landing legs down (WP 0005)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

DISASSEMBLY**NOTE**

There are four wheel chocks, and they are stowed in the stowage box located on the left (road) side of the semitrailer.

Remove two clips (Figure 1, Item 1) and chain (Figure 1, Item 2) from two wheel chocks (Figure 1, Item 3).

END OF TASK**ASSEMBLY**

Install two clips (Figure 1, Item 1) and chain (Figure 1, Item 2) on two wheel chocks (Figure 1, Item 3).

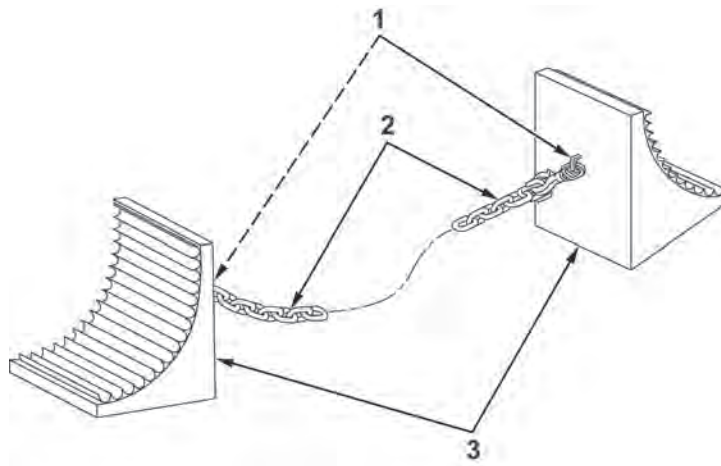


Figure 1. Wheel Chocks Disassembly and Assembly.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

SUSPENSION REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Cloth, Abrasive (WP 0137, Table 1, Item 9)
Locknut Qty: 8 (WP 0114, Figure 25, Item 7)
Locknut Qty: 8 (WP 0114, Figure 25, Item 15)

References

WP 0037

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Tires and wheels removed (WP 0026)
Hubs and brake drums removed (WP 0050)
Air reservoirs drained (WP 0024)
All air brake chamber lines and connectors
disconnected and removed from axle
(WP 0044)

Personnel Required

(4)

WARNING



- Axle weighs 200 lb (91 kg). Use four personnel to lift axle. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The axle must be firmly supported with suitable support devices before performing Steps 2, 3, and 4. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

NOTE

This removal and installation procedure is for one side of the semitrailer at a time.

REMOVAL

1. Raise and support semitrailer frame with jack stands.
2. Place floor jacks and jack stands into position to support both axles.
3. Evenly remove eight bolts (Figure 1, Item 4), washers (Figure 1, Item 9), and locknuts (Figure 1, Item 10) from two spring cap ends (Figure 1, Item 1). Discard locknuts (Figure 1, Item 10).
4. Evenly remove eight locknuts (Figure 1, Item 3) and 16 washers (Figure 1, Item 2) from four U-bolts (Figure 1, Item 11). Remove U-bolts. Remove two spring cap ends (Figure 1, Item 1) and four rubber pads (Figure 1, Item 7) from spring (Figure 1, Item 8).

WARNING

Spring weighs 240 lb (109 kg). Use four personnel to lift spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

Spring seats and adjustment plates are welded to the axle for alignment. Axles must be reinstalled in the same position (front or rear) to maintain proper axle alignment.

5. Remove jack stands then using previously positioned floor jacks, slowly lower axles enough to clear spring (Figure 1, Item 8).
6. Remove four nuts (Figure 1, Item 16), washers (Figure 1, Item 15), lower trunnion hub (Figure 1, Item 14), two U-bolts (Figure 1, Item 5), and spring wear plate (Figure 1, Item 6).
7. Remove spring (Figure 1, Item 8) and upper trunnion hub (Figure 1, Item 13) from trunnion tube (Figure 1, Item 12).
8. Remove bushing (Figure 1, Item 17) and washer (Figure 1, Item 18) from trunnion tube (Figure 1, Item 12).
9. Repeat all steps for opposite side of trailer if required.

REMOVAL - Continued

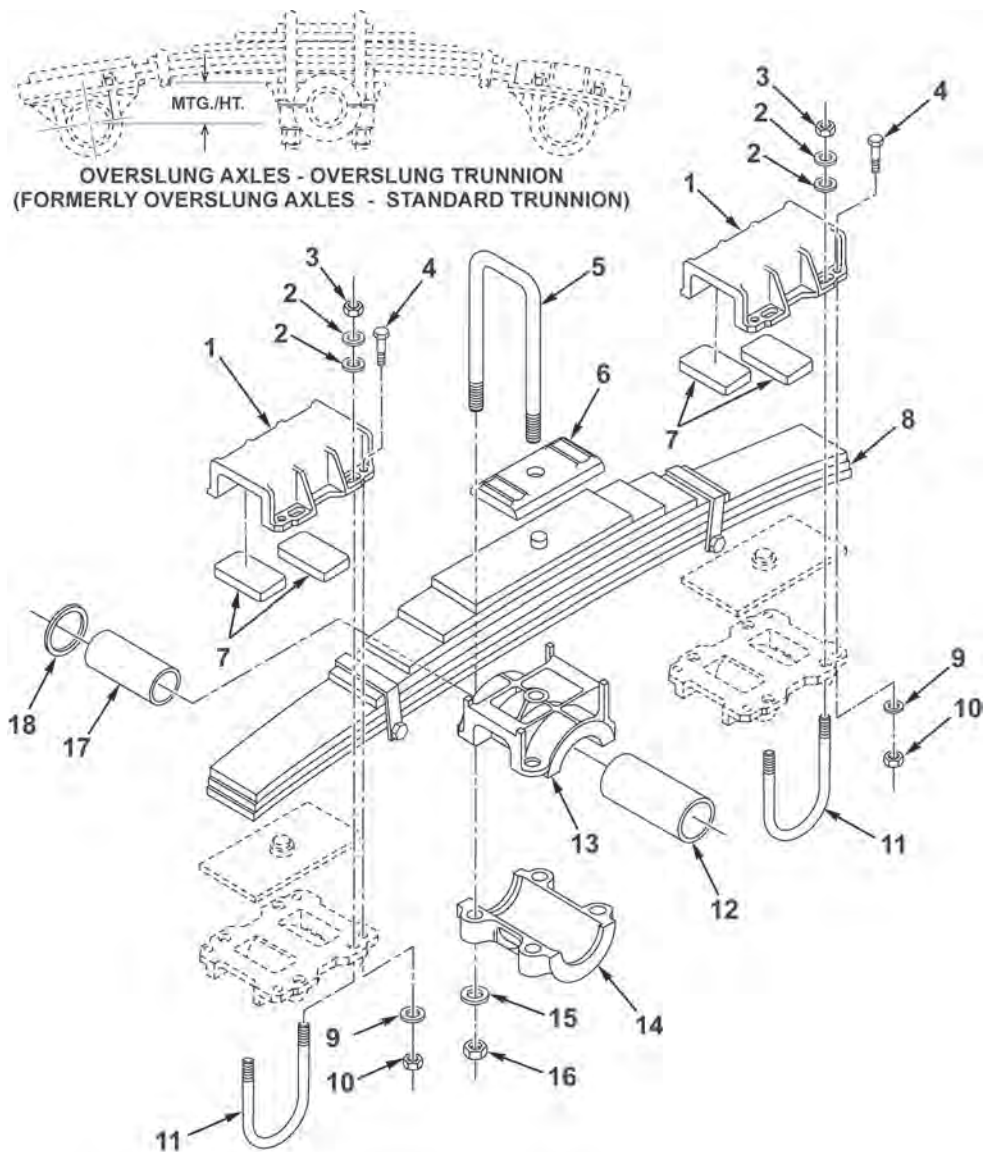


Figure 1. M871R and M871A1R Suspension Removal.

END OF TASK

INSTALLATION**NOTE**

- If new axles are being installed, refer to WP 0037 for spring seat installation and axle alignment.
- Spring seats and adjustment plates are welded to axles for alignment. Axles must be reinstalled in the same position (front or rear) as original installation to maintain proper axle alignment.
- Remove, clean with abrasive cloth, and inspect trunnion bushing before installation; it is recommended to discard and replace bushing.

1. Install washer (Figure 2, Item 20) and bushing (Figure 2, Item 19) on trunnion tube (Figure 2, Item 14).
2. Install upper trunnion hub (Figure 2, Item 15), lower trunnion hub (Figure 2, Item 16), spring (Figure 2, Item 8), and spring wear plate (Figure 2, Item 6) using two U-bolts (Figure 2, Item 5) and four washers (Figure 2, Item 17) and nuts (Figure 2, Item 18). Snug but do not fully tighten at this time.

WARNING

Spring weighs 240 lb (109 kg). Use four personnel to lift spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

3. If installing the same axle that was removed, position with two welded spring seats (Figure 2, Item 10) and adjustment plates (Figure 2, Item 9) under the spring (Figure 2, Item 8), and support using jack stands. If installing new axle, go to (WP 0037).
4. Install four rubber pads (Figure 2, Item 7) on top of spring (Figure 2, Item 8). Secure spring (Figure 2, Item 8) to axle by installing four U-bolts (Figure 2, Item 13) around axles and through two spring seats (Figure 2, Item 10), adjustment plates (Figure 2, Item 9), and end caps (Figure 2, Item 1). Secure with 16 washers (Figure 2, Item 2) and eight new locknuts (Figure 2, Item 3). Snug but do not tighten at this time.
5. Finish securing two end caps (Figure 2, Item 1) to spring seats (Figure 2, Item 10) and adjustment plates (Figure 2, Item 9) using eight bolts (Figure 2, Item 4), washers (Figure 2, Item 11), and new locknuts (Figure 2, Item 12).
6. Tighten suspension nuts to the following in-service Dry torque value:

5/8 in. 18 UNF Nut: 180 lb-ft (244 N•m)

3/4 in. 16 UNF Nut: 300 lb-ft (407 N•m)

1-1/8 in. 12 UNF Nut: 880 lb-ft (1,193 N•m)

INSTALLATION - Continued

7. If using new Wet (oiled) installation hardware, use the following Wet torque values:

5/8 in. 18 UNF Nut: 130 lb-ft (176 N•m)

3/4 in. 16 UNF Nut: 220 lb-ft (298 N•m)

1-1/8 in. 12 UNF Nut: 670 lb-ft (908 N•m)

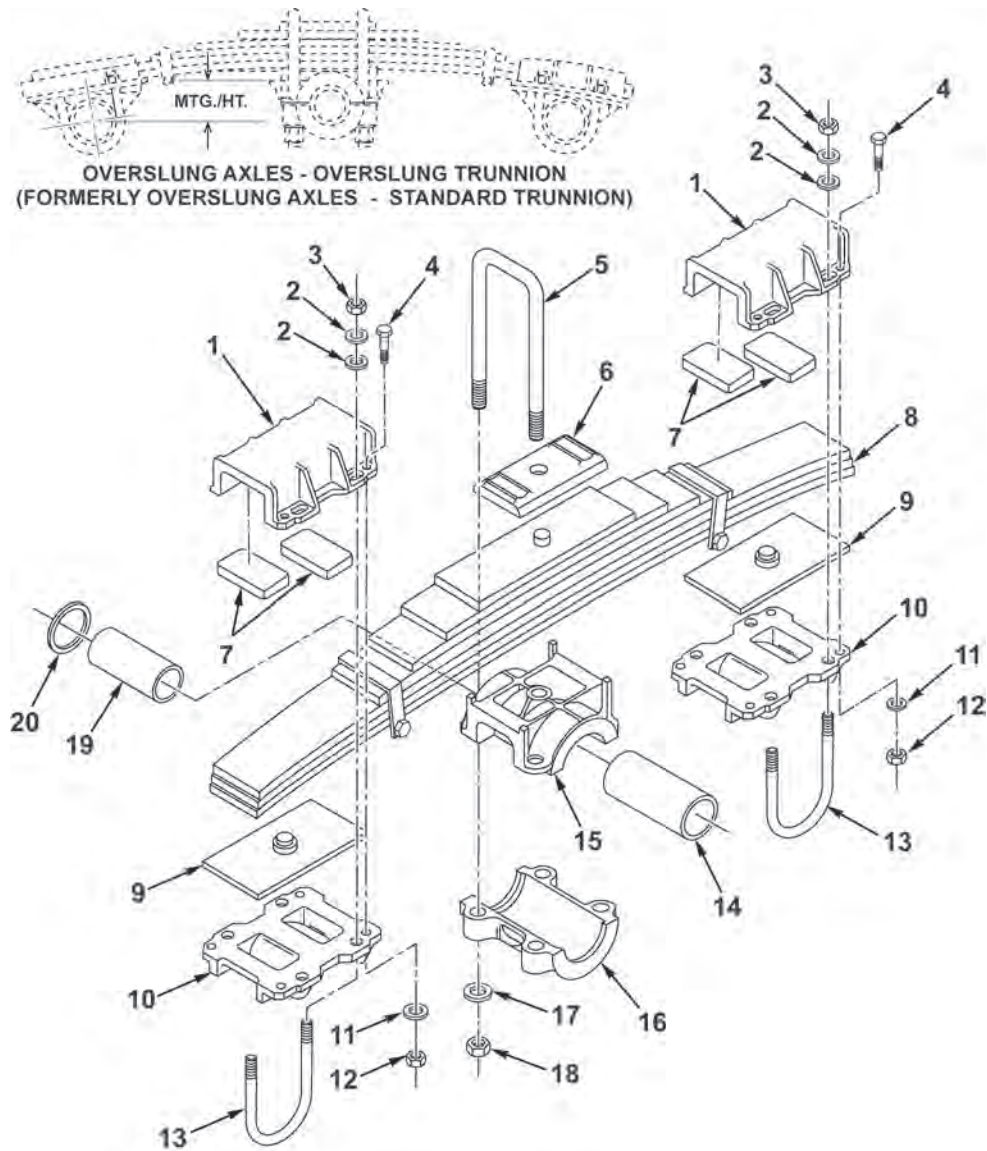


Figure 2. M871R and M871A1R Suspension Installation.

END OF TASK

FOLLOW-ON TASKS

1. Close air reservoirs (WP 0024).
2. Align axle (WP 0037).
3. Reconnect air brake chamber lines and connector to axle (WP 0043).
4. Install hubs and brake drums (WP 0050).
5. Install tires and wheels (WP 0026).
6. Connect semitrailer to prime mover (WP 0005).
7. Raise landing legs (WP 0005).
8. Road test to ensure proper operation and tracking of axles.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE SUSPENSION REPLACEMENT (M871A2R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Cloth, Abrasive (WP 0137, Table 1, Item 9)
Locknut Qty: 8 (WP 0114, Figure 25, Item 35)
Locknut Qty: 8 (WP 0114, Figure 25, Item 42)

References

WP 0037

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Tires and wheels removed (WP 0026)
Hubs and brake drums removed (WP 0050)
Air reservoirs drained (WP 0024)
All air brake chamber lines and connectors
disconnected and removed from axle
(WP 0044)

Personnel Required

(4)

WARNING



- Axle weighs 200 lb (91 kg). Use four personnel to lift axle. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The axle must be firmly supported with suitable support devices before performing Steps 2, 3, and 4. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

REMOVAL**NOTE**

This removal and installation procedure is for one side of the semitrailer at a time.

1. Raise and support semitrailer frame with jack stands.
2. Place floor jacks into position to support both axles.
3. Evenly remove eight bolts (Figure 1, Item 9), washers (Figure 1, Item 11), and locknuts (Figure 1, Item 12) from two spring cap ends (Figure 1, Item 1). Discard locknuts (Figure 1, Item 12).
4. Evenly remove eight locknuts (Figure 1, Item 4) and 16 washers (Figure 1, Items 2 and 3) from four U-bolts (Figure 1, Item 13). Remove U-bolts (Figure 1, Item 13). Discard locknuts (Figure 1, Item 4).
5. Remove two spring cap ends (Figure 1, Item 1) and four rubber pads (Figure 1, Item 17) from spring (Figure 1, Item 10).

WARNING

Spring weighs 240 lb (109 kg). Use four personnel to lift spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

Spring seats and adjustment plates are welded to the axle for alignment. Axles must be reinstalled in the same position (front or rear) to maintain proper axle alignment.

6. Using previously positioned floor jacks, slowly lower axles enough to clear spring (Figure 1, Item 10).
7. Remove four nuts (Figure 1, Item 14), washers (Figure 1, Item 15), spring wear plate (Figure 1, Item 16), and two U-bolts (Figure 1, Item 8).
8. Remove spring (Figure 1, Item 10), lower trunnion hub (Figure 1, Item 18), upper trunnion hub (Figure 1, Item 7), bushing (Figure 1, Item 6), and washer (Figure 1, Item 5) from trunnion tube (Figure 1, Item 19).
9. Repeat all steps for opposite side of trailer as required.

REMOVAL - Continued

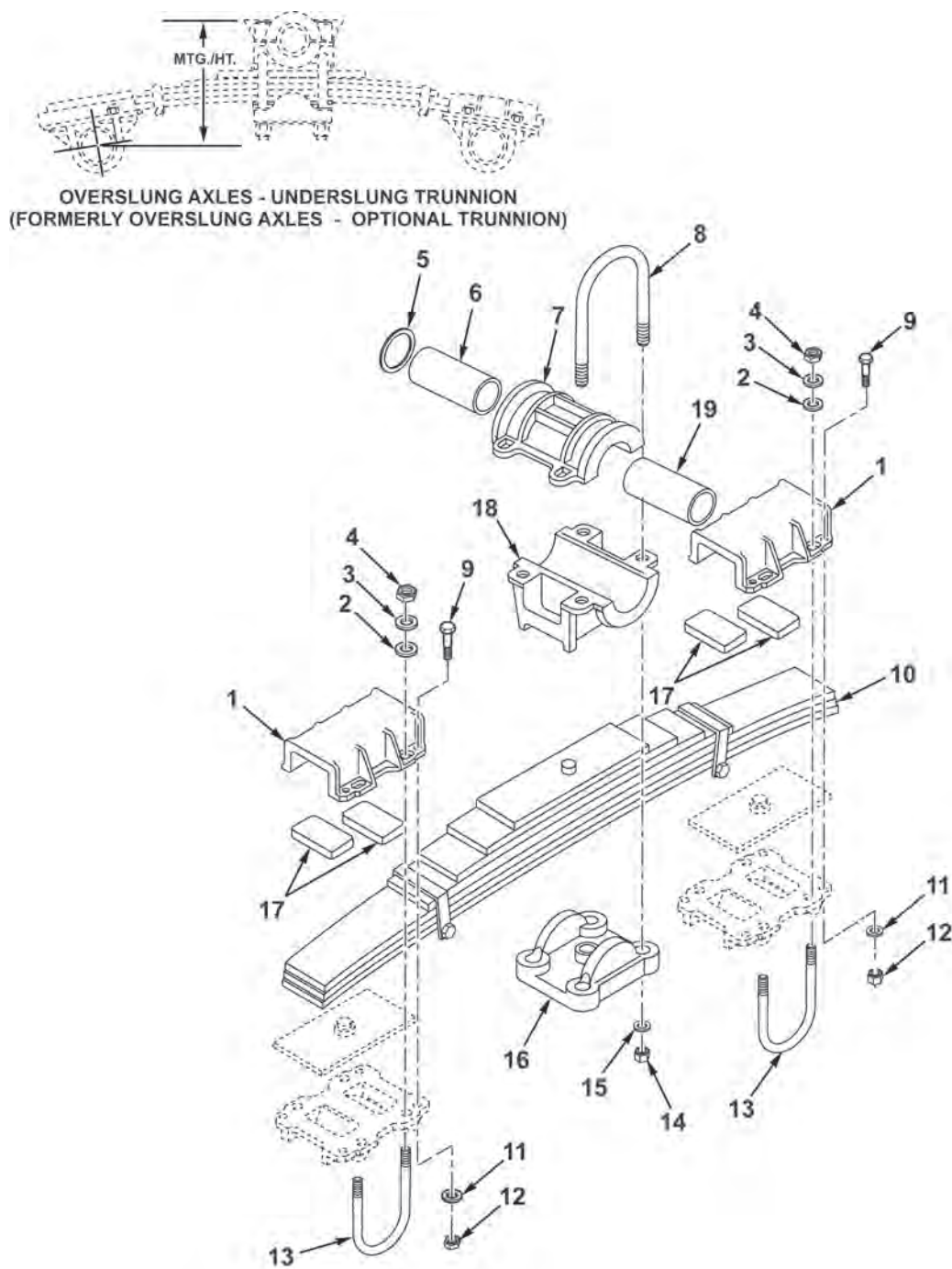


Figure 1. M871A2R Suspension Removal.

END OF TASK

INSTALLATION**NOTE**

- If new axles are being installed, refer to WP 0037 for spring seat installation and axle alignment.
- Spring seats and adjustment plates are welded to axles for alignment. Axles must be reinstalled in the same position (front or rear) as original installation to maintain proper axle alignment.
- Remove, clean with abrasive cloth, and inspect trunnion bushing before installation; it is recommended to discard and replace bushing.

1. Install washer (Figure 2, Item 5) and bushing (Figure 2, Item 6) on trunnion tube (Figure 2, Item 19).
2. Install upper trunnion hub (Figure 2, Item 7), lower trunnion hub (Figure 2, Item 18), spring (Figure 2, Item 10), and spring wear plate (Figure 2, Item 16) using two U-bolts (Figure 2, Item 8), four washers (Figure 2, Item 15), and nuts (Figure 2, Item 14). Snug but do not fully tighten at this time.

WARNING

Spring weighs 240 lb (109 kg). Use four personnel to lift spring. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

3. If installing the same axle, position with two welded spring seats (Figure 2, Item 21) and adjustment plates (Figure 2, Item 20) under spring (Figure 2, Item 10), and support using jack stands. If installing new axle, go to WP 0037.
4. Install four rubber pads (Figure 2, Item 17) on top of spring (Figure 2, Item 10). Secure spring (Figure 2, Item 10) to axle by installing four U-bolts (Figure 2, Item 13) around axles and through two spring seats (Figure 2, Item 21), adjustment plates (Figure 2, Item 20), and end caps (Figure 2, Item 1). Secure with 16 washers (Figure 2, Items 2 and 3) and eight new locknuts (Figure 2, Item 4). Snug but do not tighten at this time.
5. Finish securing two end caps (Figure 2, Item 1) to spring seats (Figure 2, Item 21) and adjustment plates (Figure 2, Item 20) using eight bolts (Figure 2, Item 9), washers (Figure 2, Item 11), and new locknuts (Figure 2, Item 12).
6. Tighten nuts (Figure 2, Item 14) to the following in-service Dry torque values:

5/8 in. 18 UNF Nut: 180 lb-ft (244 N•m)

3/4 in. 16 UNF Nut: 300 lb-ft (407 N•m)

1-1/8 in. 12 UNF Nut: 880 lb-ft (1,193 N•m)

7. If using new Wet (oiled) installation hardware, use the following Wet torque values:

5/8 in. 18 UNF Nut: 130 lb-ft (176 N•m)

3/4 in. 16 UNF Nut: 220 lb-ft (298 N•m)

1-1/8 in. 12 UNF Nut: 670 lb-ft (908 N•m)

INSTALLATION - Continued

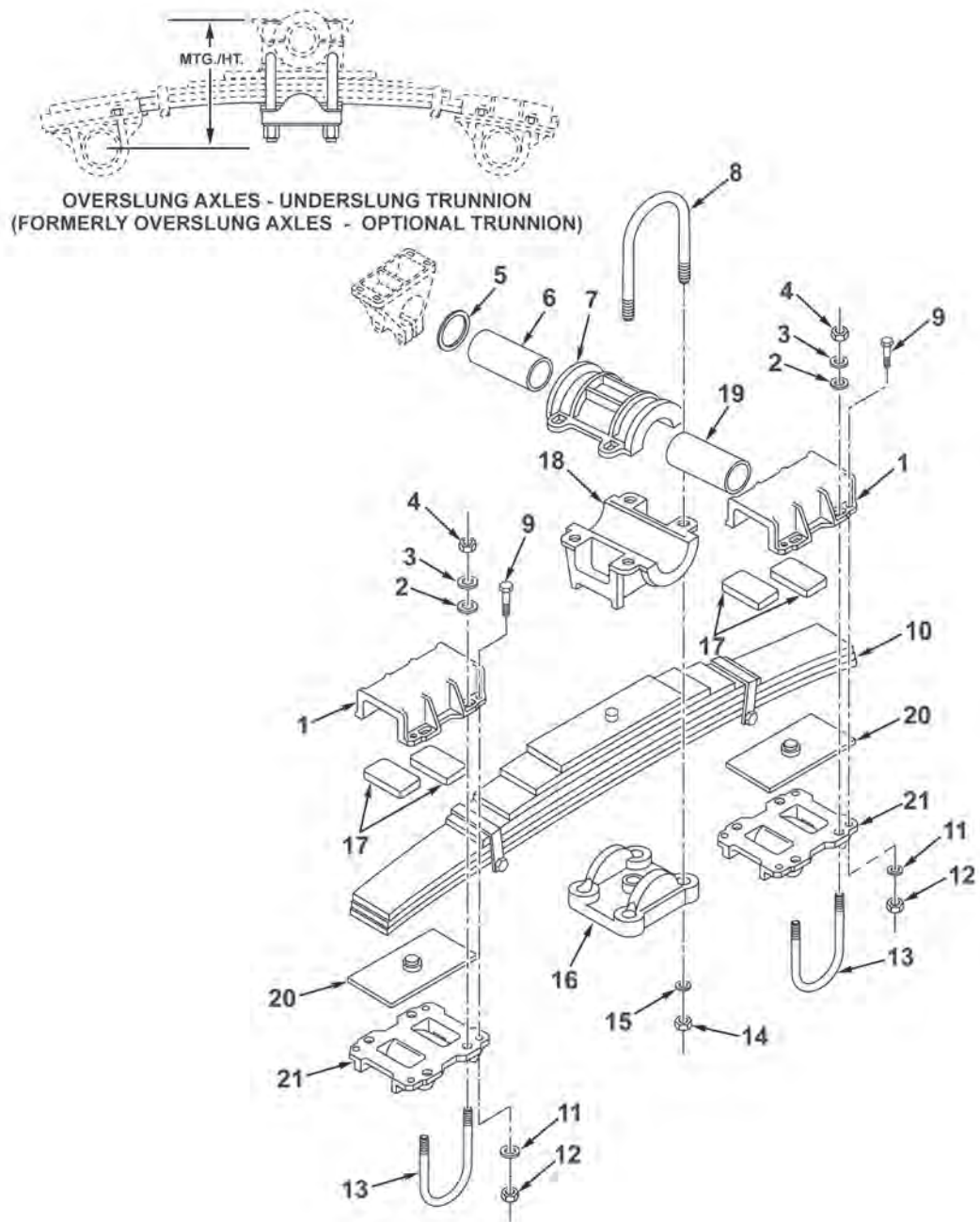


Figure 2. M871A2R Suspension Installation.

END OF TASK

FOLLOW-ON TASKS

1. Align axle (WP 0037).
2. Reconnect air brake chamber lines and connector to axle (WP 0044).
3. Close air reservoirs (WP 0024).
4. Install hubs and brake drums (WP 0050).
5. Install tires and wheels (WP 0026).
6. Connect semitrailer to prime mover (WP 0005).
7. Raise landing legs (WP 0005).
8. Leak check air brake chamber connections and clamps.
9. Road test to ensure proper operation and tracking of axles.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE TRUNNION TUBE REPLACEMENT (M871A2R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Bushing, Nonmetallic
Qty: AR (WP 0114, Figure 25, Item 33)
Cloth, Abrasive (WP 0137, Table 1, Item 9)
Locknut Qty: 4 (WP 0114, Figure 25, Item 35)

Personnel Required

(2)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Tires and wheels removed (WP 0026)
Air brake chamber air lines removed (WP 0044)

WARNING



- Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

These procedures are for removing and installing both trunnion tubes simultaneously.

REMOVAL

1. Raise and support both sides of semitrailer frames.
2. Place floor jacks into position to support axles.
3. Evenly remove four nuts (Figure 1, Item 11), washers (Figure 1, Item 10), and wear plate (Figure 1, Item 9) from each side of semitrailer.

NOTE

Axles will support spring assemblies.

4. Lower floor jacks until two U-bolts (Figure 1, Item 4) clear springs (Figure 1, Item 8) on each side of semitrailer.
5. Remove lower trunnion hub (Figure 1, Item 7), two U-bolts (Figure 1, Item 4), and upper trunnion hub (Figure 1, Item 5) from each trunnion tube (Figure 1, Item 3).
6. Remove bushing (Figure 1, Item 6) and washer (Figure 1, Item 12) from each trunnion tube (Figure 1, Item 3).
7. Remove two locknuts (Figure 1, Item 13) and capscrews (Figure 1, Item 2) from each trunnion hangar (Figure 1, Item 1). Discard locknuts (Figure 1, Item 13).
8. Repeat Steps 5 through 7 for other side of semitrailer.

WARNING

Trunnion tube weighs 100 lb (45 kg). Use two personnel to lift trunnion tube. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

9. With helper, remove trunnion tubes (Figure 1, Item 3) from trunnion hangars (Figure 1, Item 1).
10. Clean trunnion tubes (Figure 1, Item 3) using a fine abrasive cloth if needed.

END OF TASK**INSTALLATION****WARNING**

Trunnion tube weighs 100 lb (45 kg). Use two personnel to lift trunnion tube. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

NOTE

Measure from end of trunnion tube to trunnion hangar to determine if tube is centered.

1. With helper, install cleaned trunnion tubes (Figure 1, Item 3) into trunnion hangars (Figure 1, Item 1), ensuring each tube is centered evenly.

INSTALLATION - Continued

2. Install washers (Figure 1, Item 12) and bushings (Figure 1, Item 6) on each trunnion tube (Figure 1, Item 3). It is recommended to install new trunnion bushings on each tube.

NOTE

Before tightening locknuts, ensure trunnion tubes are centered.

3. Install two capscrews (Figure 1, Item 2) and new locknuts (Figure 1, Item 13) on each trunnion hangar (Figure 1, Item 1). Torque locknuts (Figure 1, Item 13). If Dry, torque to 330 lb-ft (407 N•m). If Wet, torque to 220 lb-ft (298 N•m).
4. Install two U-bolts (Figure 1, Item 4) on upper trunnion hub (Figure 1, Item 5).
5. Slide upper trunnion hub (Figure 1, Item 5) on trunnion tube (Figure 1, Item 3).
6. Position lower trunnion hub (Figure 1, Item 7) on spring (Figure 1, Item 8).
7. Using floor jacks, raise axle and spring assembly (Figure 1, Item 8) while guiding U-bolt (Figure 1, Item 4) through lower trunnion hub (Figure 1, Item 7).

NOTE

Before tightening locknuts, ensure trunnion tubes are centered.

8. Install wear plate (Figure 1, Item 9) with four washers (Figure 1, Item 10) and nuts (Figure 1, Item 11).
9. Repeat Steps 4 through 8 for other side of semitrailer.
10. Lower axles and remove frame supports.

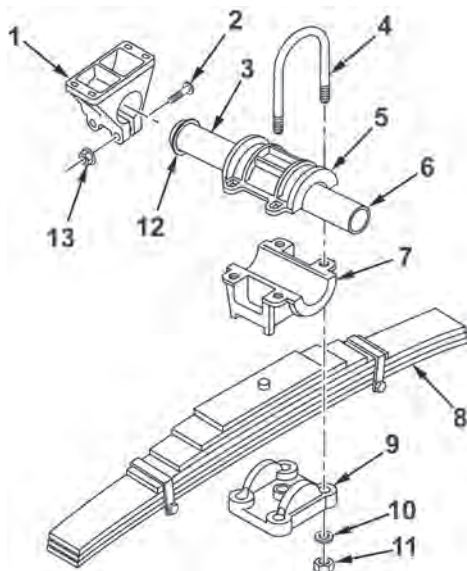


Figure 1. M871A2R Trunnion Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Install air brake chamber air lines (WP 0044).
5. Install tires and wheels (WP 0026).
6. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
TRUNNION TUBE REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Torque Multiplier (WP 0138, Table 1, Item 25)
Torque Wrench 120 to 600 lb-ft (163 to 813 N•m)
(WP 0138, Table 1, Item 27)

Materials/Parts

Bushing, Nonmetallic
Qty: AR (WP 0114, Figure 25, Item 18)
Cloth, Abrasive (WP 0137, Table 1, Item 9)
Locknut Qty: 4 (WP 0114, Figure 25, Item 7)

Personnel Required

(2)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Tires and wheels removed (WP 0026)
Air brake chamber air lines removed (WP 0044)

WARNING



- Suitable support devices must be positioned directly under axle to prevent slippage. Suitable support devices must be used only on a hard, level surface to prevent shifting of semitrailer. Use ground boards and wheel chocks. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.
- The frame and axle must be firmly supported on a hard, level surface. Use ground boards if necessary. Direct all personnel to stay clear of semitrailer when supported in air. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

These procedures are for removing and installing both trunnion tubes simultaneously.

REMOVAL

1. Raise and support both sides of semitrailer frame with floor jacks.
2. Place floor jacks into position to support axles.
3. Evenly remove four nuts (Figure 1, Item 10), washers (Figure 1, Item 9), and lower trunnion hub (Figure 1, Item 8) from each side of semitrailer.
4. Remove two U-bolts (Figure 1, Item 3) and wear plate (Figure 1, Item 4) from each side of semitrailer.

NOTE

Axles will support spring assemblies.

5. Slowly lower semitrailer frame until trunnion tube (Figure 1, Item 7) clears spring (Figure 1, Item 5) enough to remove upper trunnion hub (Figure 1, Item 6) from both sides of semitrailer.
6. Remove bushing (Figure 1, Item 11) and spacer (Figure 1, Item 12) from trunnion tube (Figure 1, Item 7) on both sides of semitrailer.
7. Remove two locknuts (Figure 1, Item 13) and capscrews (Figure 1, Item 2) from trunnion hangar (Figure 1, Item 1) on both sides of semitrailer. Discard locknuts (Figure 1, Item 13).

WARNING

Trunnion tube weighs 100 lb (45 kg). Use two personnel to lift trunnion tube. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

8. With helper, remove trunnion tube (Figure 1, Item 7) from trunnion hangar (Figure 1, Item 1) on both sides of semitrailer.
9. Inspect trunnion tubes (Figure 1, Item 7) and clean using fine abrasive cloth as needed.

END OF TASK**INSTALLATION****WARNING**

Trunnion tube weighs 100 lb (45 kg). Use two personnel to lift trunnion tube. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

NOTE

Measure from end of trunnion tube to trunnion hangar to determine if tube is centered.

1. With helper, install cleaned trunnion tube (Figure 1, Item 7) into trunnion hangar (Figure 1, Item 1) on both sides of semitrailer, ensuring tubes are centered evenly.
2. Install spacer (Figure 1, Item 12) and bushing (Figure 1, Item 11) onto trunnion tube (Figure 1, Item 7) on both sides of semitrailer. It is recommended to use new trunnion bushing.

INSTALLATION - Continued**NOTE**

Before tightening locknuts, ensure trunnion tubes are centered.

3. Install two capscrews (Figure 1, Item 2) and new locknuts (Figure 1, Item 13) on each trunnion hangar (Figure 1, Item 1). Torque locknuts (Figure 1, Item 13). If Dry, torque to 330 lb-ft (407 N•m). If Wet, torque to 220 lb-ft (298 N•m).
4. Place upper trunnion hub (Figure 1, Item 6) onto trunnion tube (Figure 1, Item 7), and slowly raise semitrailer frame until upper trunnion hub (Figure 1, Item 6) and trunnion tube (Figure 1, Item 7) line up and mate with spring (Figure 1, Item 5) on both sides of semitrailer.
5. Place wear plate (Figure 1, Item 4) onto top of spring (Figure 1, Item 5), and put two U-bolts (Figure 1, Item 3) over wear plate (Figure 1, Item 4) and through upper trunnion hub (Figure 1, Item 6) on both sides of semitrailer.
6. Install lower trunnion hub (Figure 1, Item 8) onto trunnion tube (Figure 1, Item 7) and up through two U-bolts (Figure 1, Item 3), and secure with four washers (Figure 1, Item 9) and nuts (Figure 1, Item 10) for both sides of semitrailer. If Dry, torque to 880 lb-ft (1,193 N•m). If Wet, torque to 670 lb-ft (908 N•m).

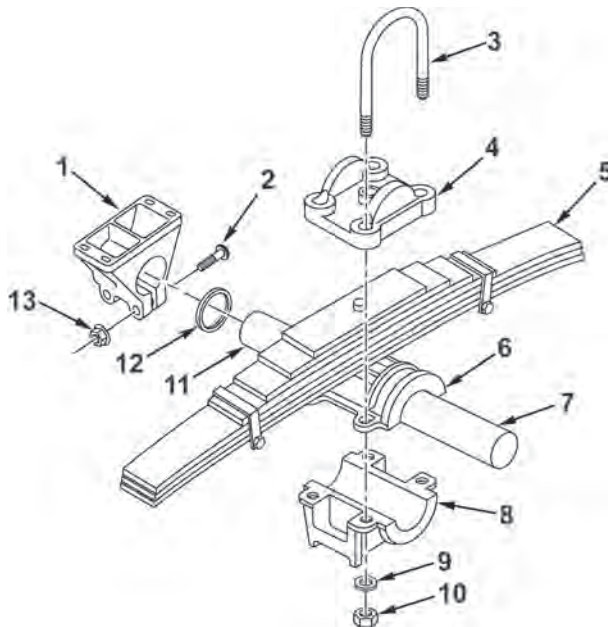


Figure 1. M871R and M871A1R Trunnion Tube Removal and Installation.

7. Remove floor jacks under axles and lower frame on both sides of semitrailer.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Install air brake chamber air lines (WP 0044).
5. Install tires and wheels (WP 0026).
6. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE BULKHEAD REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Suitable Lifting Device, 850 lb (386.56 kg)
Capacity (WP 0138, Table 1, Item 23)

Materials/Parts

Lockwasher Qty: 4 (WP 0115, Figure 26, Item 6)
Locknut Qty: 4 (WP 0115, Figure 26, Item 1)

Personnel Required

(2)

References

WP 0079

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Manifest box removed (WP 0075)

WARNING



Bulkhead weighs 557 lb (253 kg). Use suitable lifting device and two personnel to replace bulkhead. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

REMOVAL

1. Attach suitable lifting device to bulkhead (Figure 1, Item 2) at lifting points (Figure 1, Item 1).
2. Remove four bolts (Figure 1, Item 3), lockwashers (Figure 1, Item 4), and nut/plates (Figure 1, Item 5). Discard lockwashers (Figure 1, Item 4).

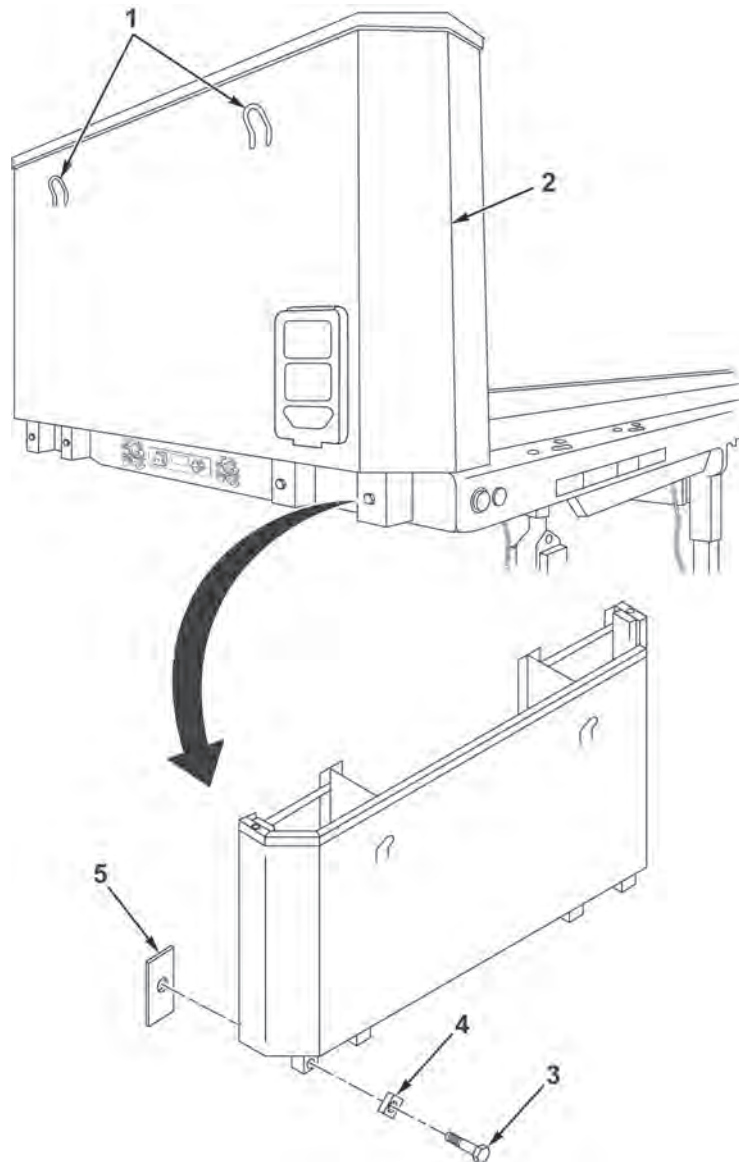


Figure 1. Bulkhead Removal.

REMOVAL - Continued

3. Remove four locknuts (Figure 2, Item 4), washers (Figure 2, Item 3), and bolts (Figure 2, Item 2). Discard locknuts (Figure 2, Item 4).
4. Use lifting device to lift bulkhead (Figure 2, Item 1) off semitrailer.

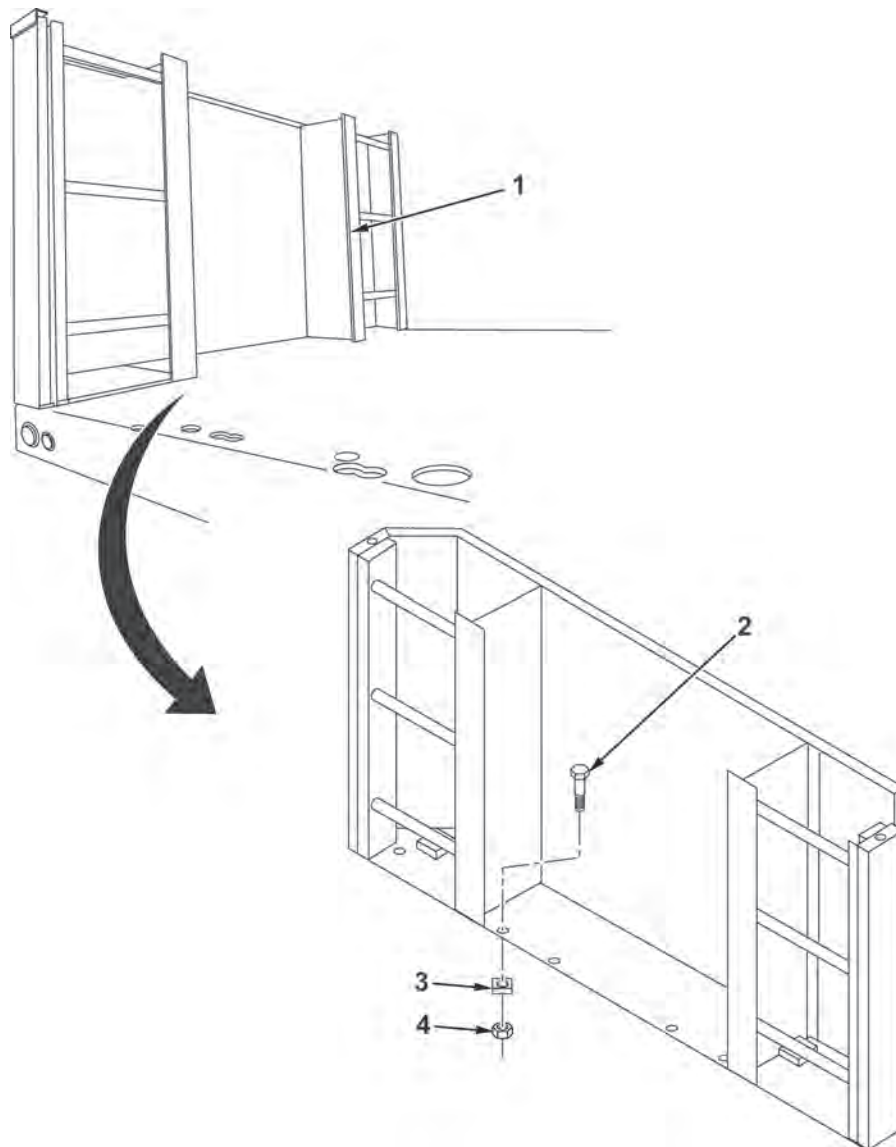


Figure 2. Bulkhead Removal.

END OF TASK

INSTALLATION

1. Use lifting device to lift bulkhead (Figure 3, Item 1), and place on semitrailer.
2. Install four bolts (Figure 3, Item 2), washers (Figure 3, Item 3), and new locknuts (Figure 3, Item 4).

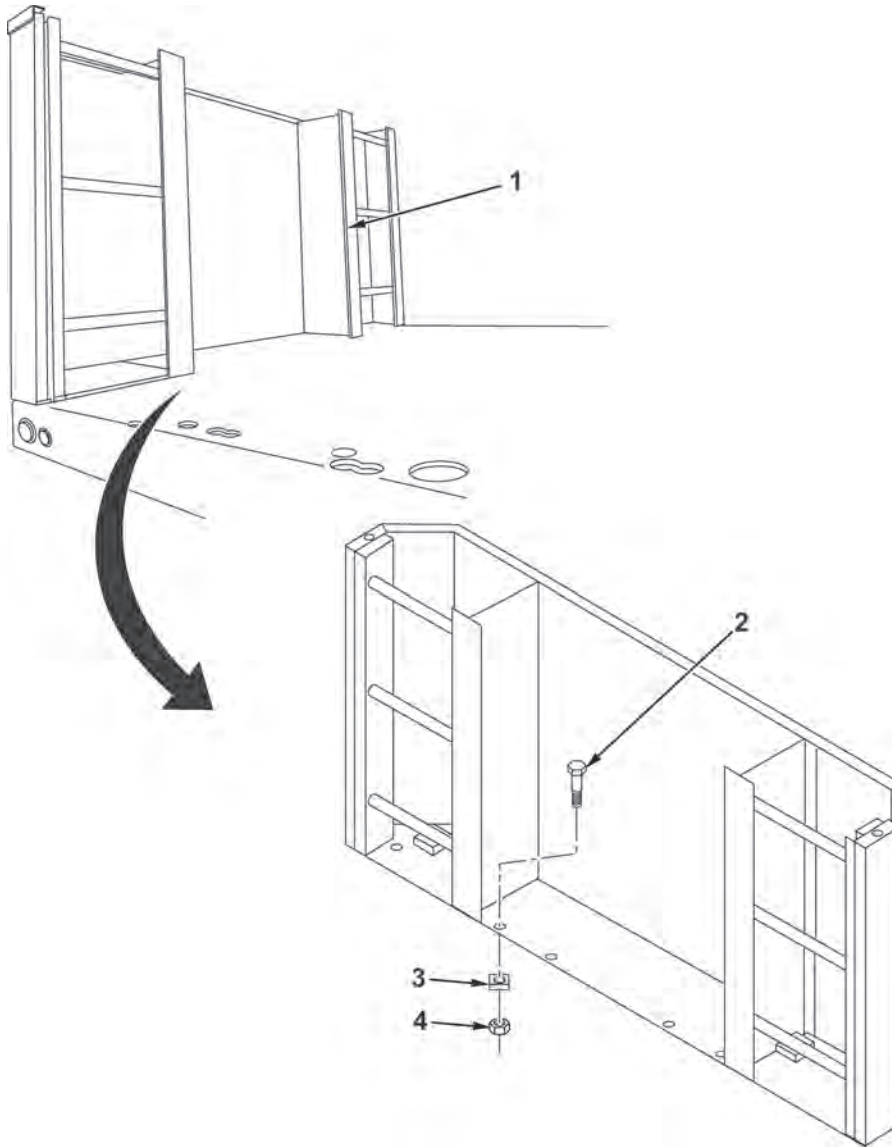


Figure 3. Bulkhead Installation.

INSTALLATION - Continued

3. Install four nuts/plates (Figure 4, Item 5), new lockwashers (Figure 4, Item 4), and bolts (Figure 4, Item 3).
4. Remove lifting device from bulkhead (Figure 4, Item 2) lifting points (Figure 4, Item 1).

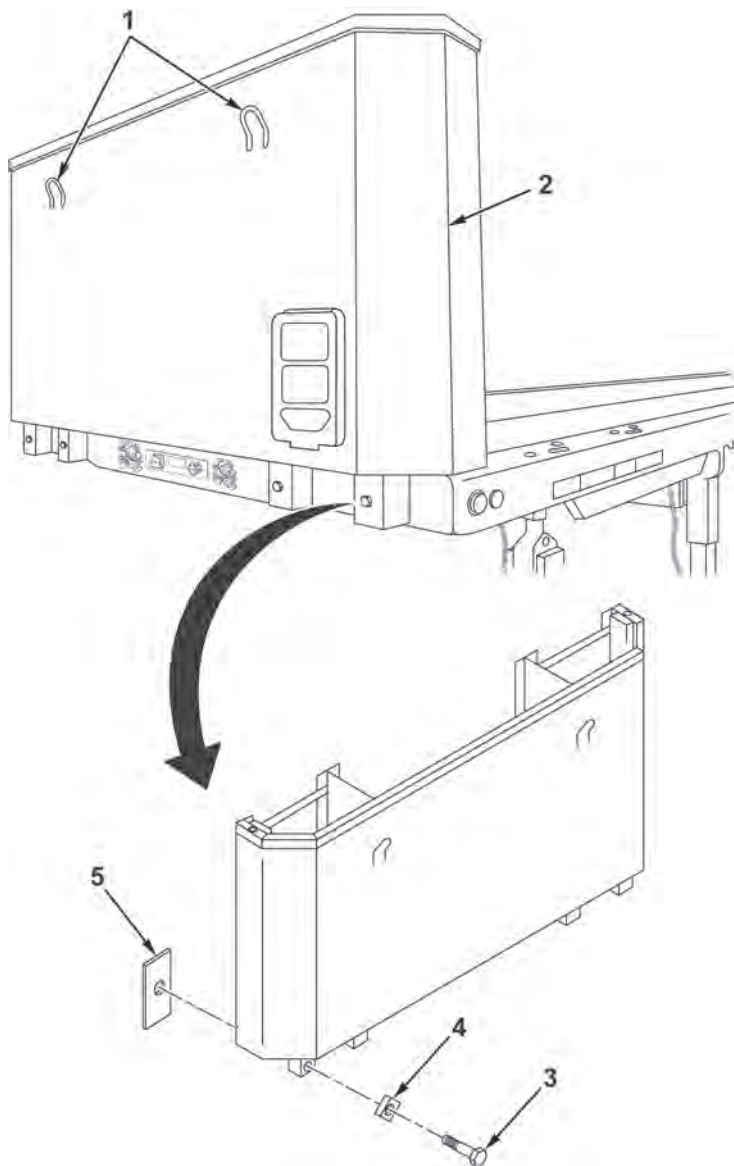


Figure 4. Bulkhead Installation.

END OF TASK

FOLLOW-ON TASKS

1. Install manifest box (WP 0075).
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Apply reflective tape (WP 0079).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
CORNER AND SIDE STAKES REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Drill (WP 0138, Table 1, Item 7)
Riveter Kit, Blind (WP 0138, Table 1, Item 17)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Side and rear panels removed (WP 0074)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Blind Rivet Qty: 17 (WP 0117, Figure 28, Item 6)

References

WP 0004

Equipment Condition

Landing legs down (WP 0005)

NOTE

Refer to WP 0004 for position of corner and side stakes.

REMOVAL**WARNING**

Particles from drilling operations are hazardous to the eyes. Eye protection is required.
Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1. Remove two links (Figure 1, Item 3), rivets (Figure 1, Item 4), lanyards (Figure 1, Item 5), and corner stakes (Figure 1, Item 2). Discard rivets (Figure 1, Item 4).
2. Remove 15 links (Figure 1, Item 8), rivets (Figure 1, Item 6), lanyards (Figure 1, Item 7), and side stakes (Figure 1, Item 1). Discard rivets (Figure 1, Item 6).

END OF TASK**INSTALLATION****WARNING**

Ensure retaining hardware is present and serviceable. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

1. Install two corner stakes (Figure 1, Item 2) using links (Figure 1, Item 3), new rivets (Figure 1, Item 4), and lanyards (Figure 1, Item 5).
2. Install 15 side stakes (Figure 1, Item 1) using links (Figure 1, Item 8), new rivets (Figure 1, Item 6), and lanyards (Figure 1, Item 7).

INSTALLATION - Continued

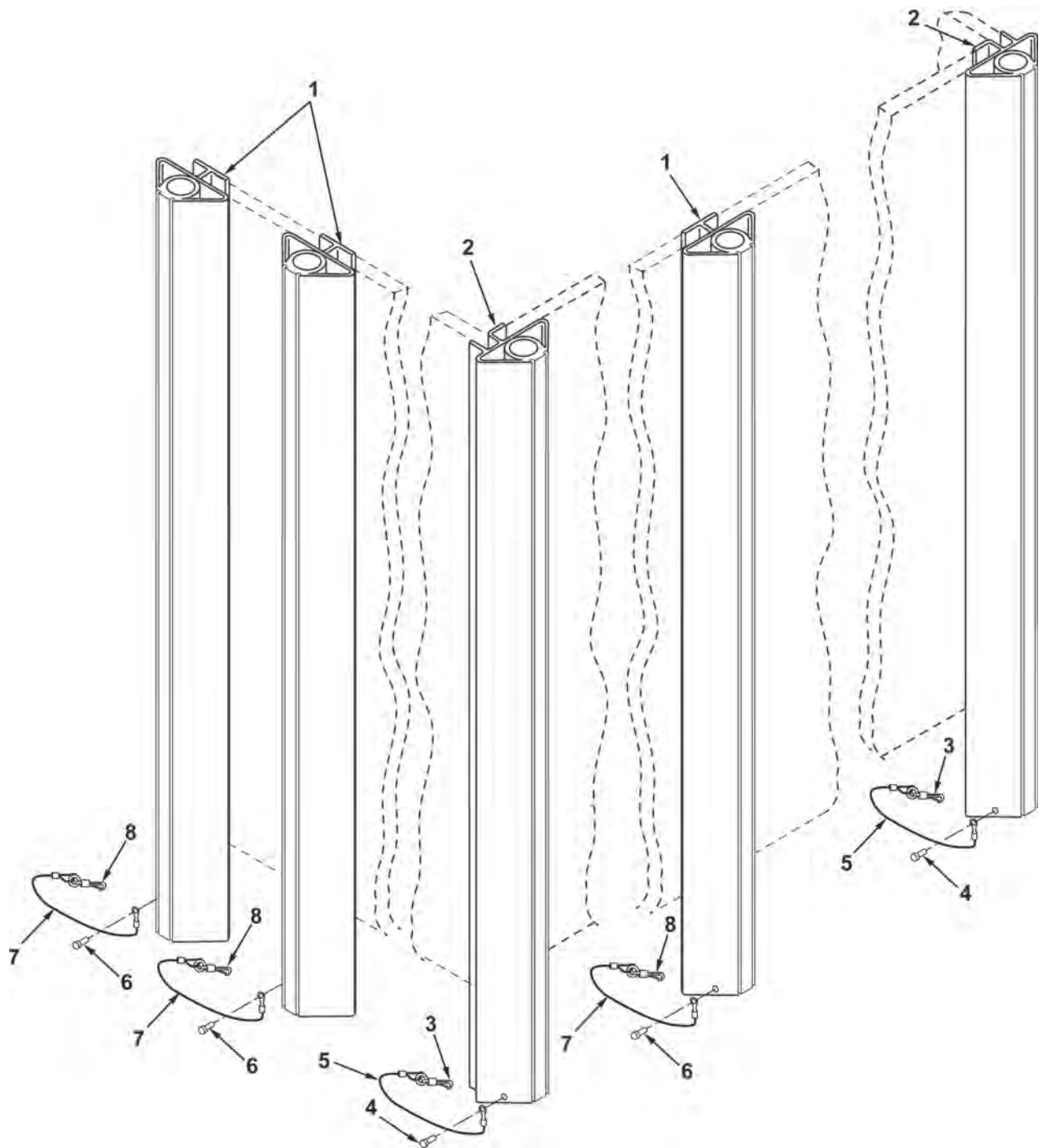


Figure 1. Corner and Side Stakes Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Install side and rear panels (WP 0074).
2. Ensure all stakes and panels are secured.
3. Connect semitrailer to prime mover (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).
5. Raise landing legs (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
MUD FLAPS REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Materials/Parts

Locknut Qty: 4 (WP 0118, Figure 29, Item 1)

Equipment Condition

Landing legs down (WP 0005)

NOTE

There are two mud flaps, and they are removed and installed the same way. These procedures cover one mud flap.

REMOVAL

Remove four locknuts (Figure 1, Item 1), washers (Figure 1, Item 2), screws (Figure 1, Item 5), bracket (Figure 1, Item 4), and mud flap (Figure 1, Item 3) from semitrailer. Discard locknuts (Figure 1, Item 1).

END OF TASK**INSTALLATION**

Secure bracket (Figure 1, Item 4) and mud flap (Figure 1, Item 3) to semitrailer using four new locknuts (Figure 1, Item 1), washers (Figure 1, Item 2), and screws (Figure 1, Item 5).

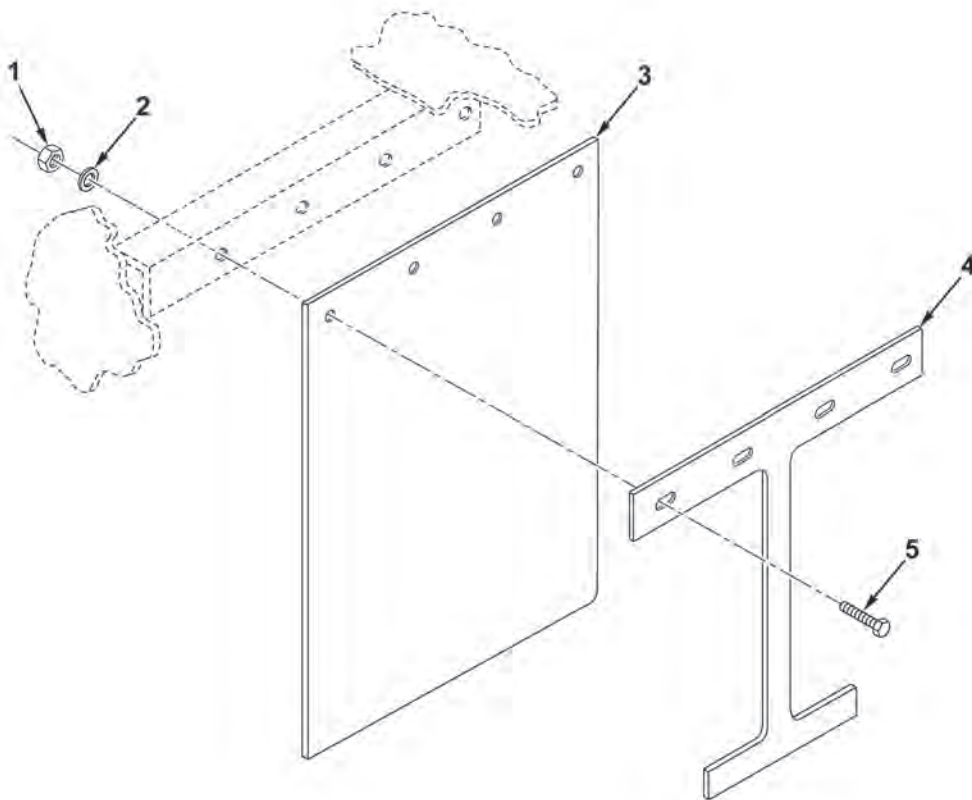


Figure 1. Mud Flap Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

FLOOR BOARDS REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Bit, Hex, Insert 1/4 in. Drive
(WP 0138, Table 1, Item 2)
Drill (WP 0138, Table 1, Item 7)
Drill Set, Twist (WP 0138, Table 1, Item 8)

Materials/Parts

Bolt, Square Neck
Qty: AR (WP 0119, Figure 30, Item 26)
Linseed Oil, Boiled (WP 0137, Table 1, Item 26)
Lockwasher
Qty: AR (WP 0119, Figure 30, Item 28)
Mounting Plate
Qty: AR (WP 0119, Figure 30, Item 29)

Materials/Parts (cont.)

Nut, Plain Hexagon
Qty: AR (WP 0119, Figure 30, Item 27)
Rag, Wiping (WP 0137, Table 1, Item 36)
Screw, Machine
Qty: AR (WP 0119, Figure 30, Item 14)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

REMOVAL

1. Measure board (Figure 1, Item 1) length and width to be replaced.
2. Remove screws (Figure 1, Item 2) as needed to free board (Figure 1, Item 1).
3. Pry board (Figure 1, Item 1) away from crossmembers (Figure 1, Item 3).
4. Repeat Steps 1 through 3 for remaining boards (Figure 1, Item 1) needing replacement.

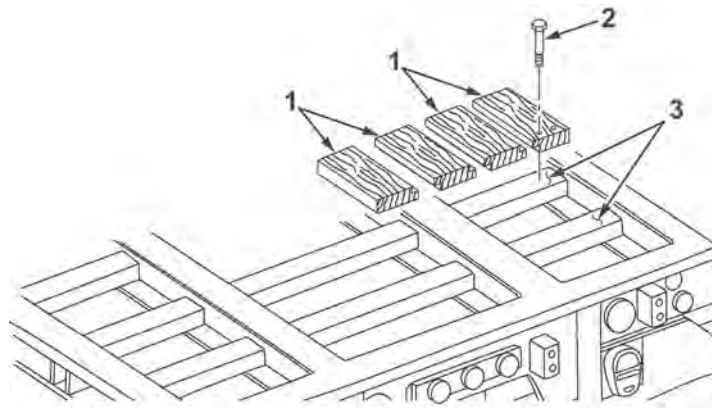


Figure 1. Floor Deck Boards Removal.

END OF TASK

SELF-TAPPING SCREW INSTALLATION

1. Refer to Figures 2 and 3 for proper floor board installation pattern.

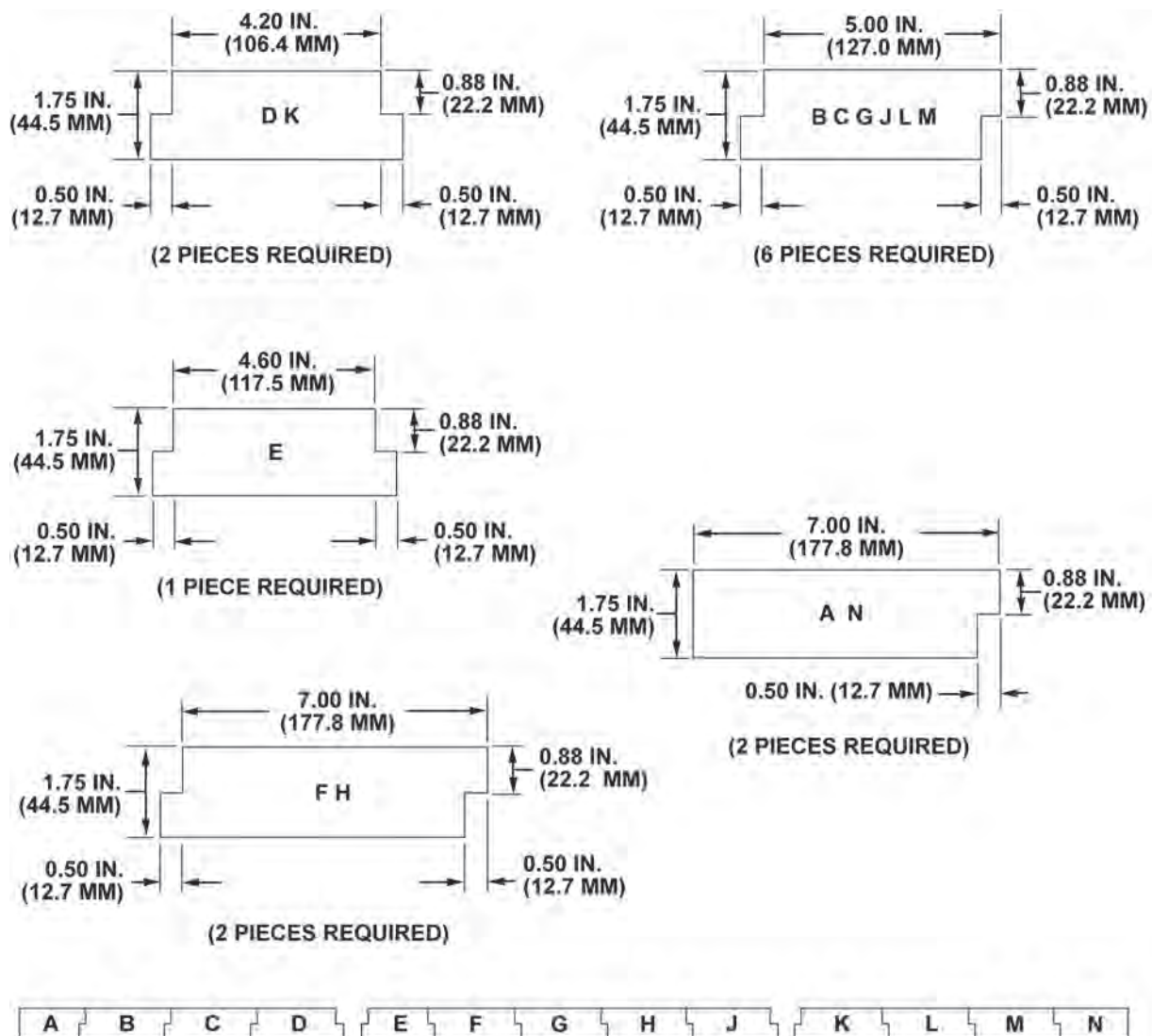


Figure 2. Floor Board Installation Pattern.

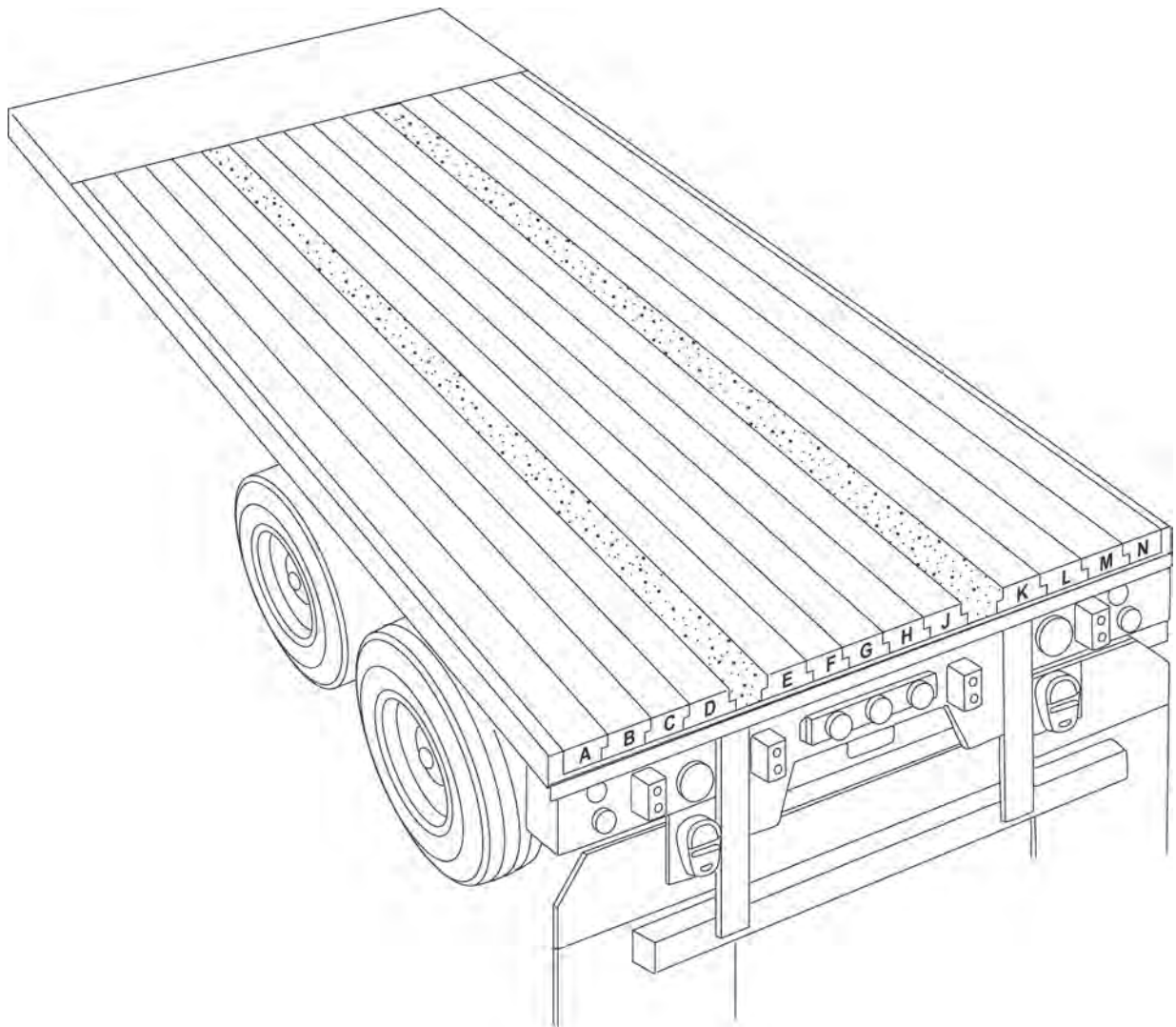
SELF-TAPPING SCREW INSTALLATION - Continued

Figure 3. Installed Floor Boards.

SELF-TAPPING SCREW INSTALLATION - Continued**NOTE**

The cut ends of boards must be centered on a crossmember.

2. Place board (Figure 4, Item 1) into position on crossmembers (Figure 4, Item 3).

WARNING

Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

3. Drill 9/32-in. holes through board (Figure 4, Item 1) and crossmembers (Figure 4, Item 3).
4. Install two screws (Figure 4, Item 2).
5. Repeat Steps 2 through 4 for remaining boards (Figure 4, Item 1) that were removed.

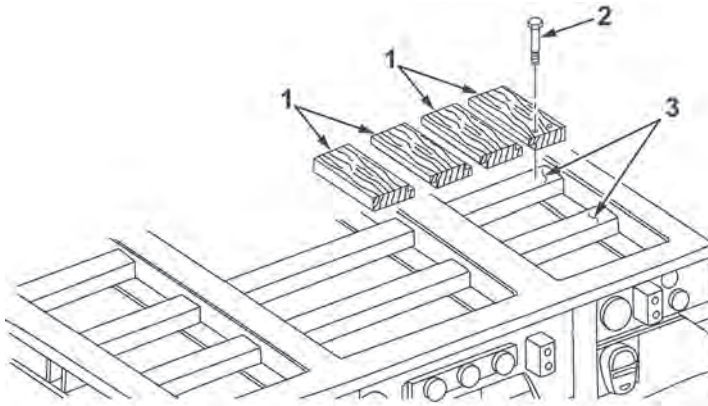


Figure 4. Floor Deck Boards Installation.

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

6. Apply linseed oil to newly installed boards (Figure 4, Item 1). Use rag to wipe excess linseed oil from board (Figure 4, Item 1) ends.

END OF TASK

CARRIAGE BOLT INSTALLATION**NOTE**

If numerous holes are in crossmembers from previous board replacements, carriage bolts should be used instead of self-tapping screws in locations that are accessible.

1. Place board (Figure 5, Item 6) into position on crossmembers (Figure 5, Item 4).
2. Place mounting plate (Figure 5, Item 5) in mounting position on crossmember (Figure 5, Item 4).
3. Use mounting plate (Figure 5, Item 5) as template, and mark board (Figure 5, Item 6) for each hole that needs to be drilled.

WARNING

Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

4. Drill 3/8-in. hole for each bolt (Figure 5, Item 1) being installed.
5. Install bolt (Figure 5, Item 1), mounting plate (Figure 5, Item 5), lockwasher (Figure 5, Item 2), and nut (Figure 5, Item 3). Tighten nut (Figure 5, Item 3) until bolt head is fully seated.

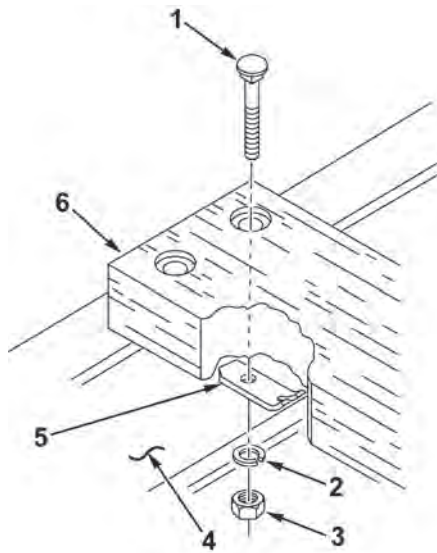


Figure 5. Floor Deck Board Bolt.

CARRIAGE BOLT INSTALLATION - Continued**WARNING**

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

6. Apply linseed oil to newly installed boards (Figure 5, Item 1). Use rag to wipe excess linseed oil from board (Figure 5, Item 1) ends.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE FLOOR BOARDS REPLACEMENT (M871A2R)

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Bit, Hex, Insert 1/4 in. Drive
(WP 0138, Table 1, Item 2)
Drill (WP 0138, Table 1, Item 7)
Drill Set, Twist (WP 0138, Table 1, Item 8)

Materials/Parts (cont.)

Mounting Plate
Qty: AR (WP 0119, Figure 30, Item 29)
Nut Qty: AR (WP 0119, Figure 30, Item 27)
Rag, Wiping (WP 0137, Table 1, Item 36)
Screw Qty: AR (WP 0119, Figure 30, Item 14)

Materials/Parts

Bolt Qty: AR (WP 0119, Figure 30, Item 26)
Linseed Oil, Boiled (WP 0137, Table 1, Item 26)
Lockwasher
Qty: AR (WP 0119, Figure 30, Item 28)

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

REMOVAL

1. Measure length and width of board (Figure 1, Item 1) to be replaced.
2. Remove screws (Figure 1, Item 2) as needed to free board (Figure 1, Item 1).
3. Pry board (Figure 1, Item 1) away from crossmembers (Figure 1, Item 3).
4. Repeat Steps 1 through 3 for remaining boards (Figure 1, Item 1) needing replacement.

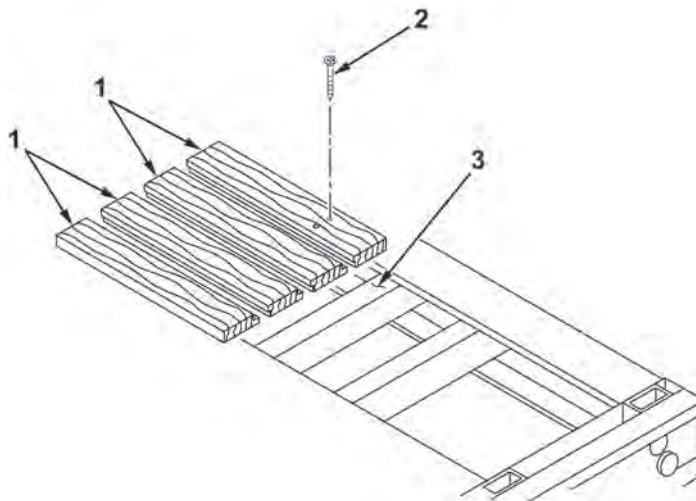


Figure 1. Floor Deck Boards Removal.

END OF TASK

SELF-TAPPING SCREW INSTALLATION

1. Refer to Figures 2 and 3 for proper floor board installation pattern.

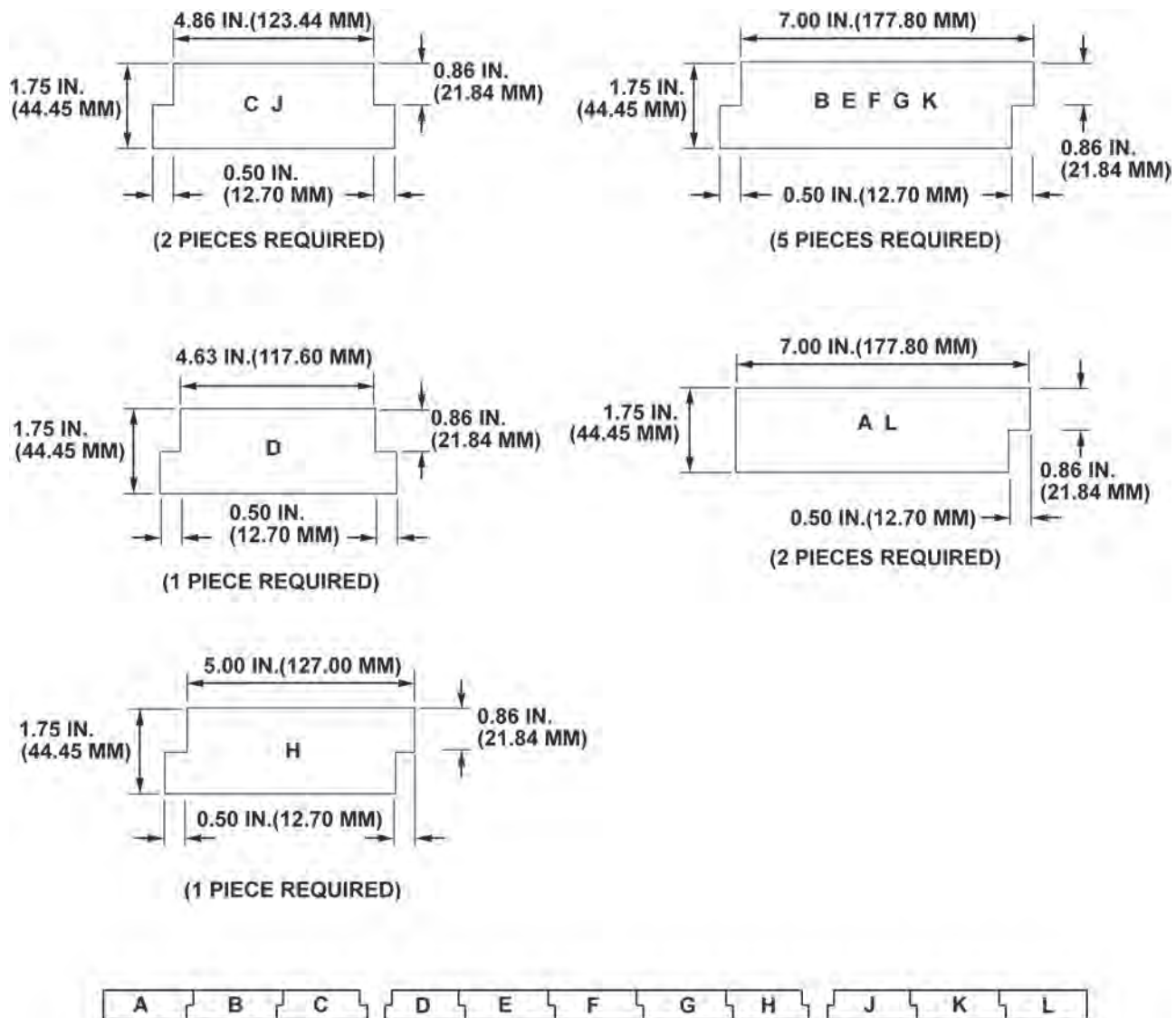


Figure 2. Floor Board Installation Pattern.

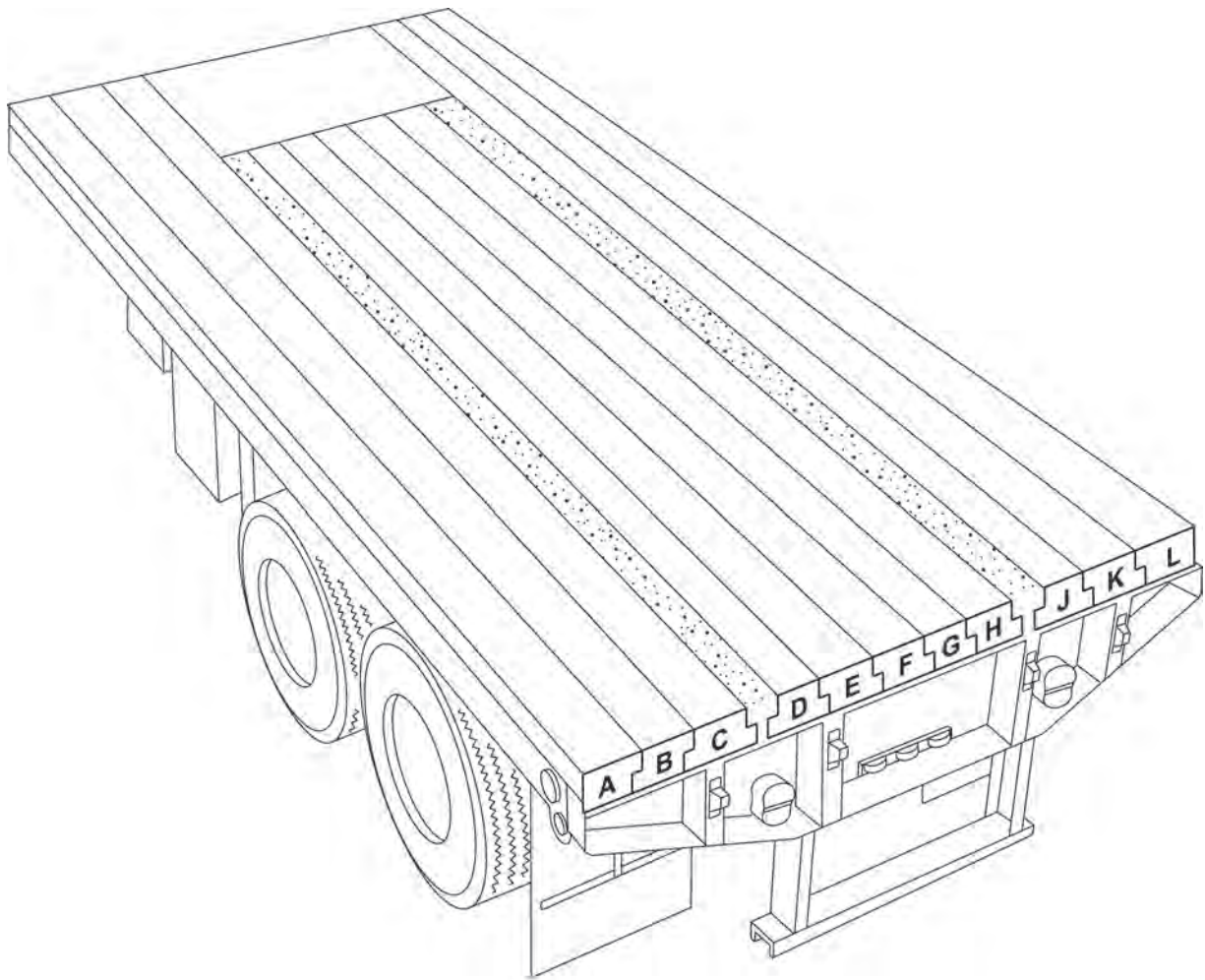
SELF-TAPPING SCREW INSTALLATION - Continued

Figure 3. Installed Floor Boards.

SELF-TAPPING SCREW INSTALLATION - Continued**NOTE**

The cut ends of boards must be centered on a crossmember.

2. Place board (Figure 4, Item 1) into position on crossmembers (Figure 4, Item 3).

WARNING

Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

3. Drill 9/32-in. holes through board (Figure 4, Item 1) and crossmembers (Figure 4, Item 3).
4. Install screws (Figure 4, Item 2).
5. Repeat Steps 1 through 4 for remaining boards (Figure 4, Item 1) that were removed.

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

6. Apply linseed oil to newly installed boards (Figure 4, Item 1). Use rag to wipe excess linseed oil from board (Figure 4, Item 1) ends.

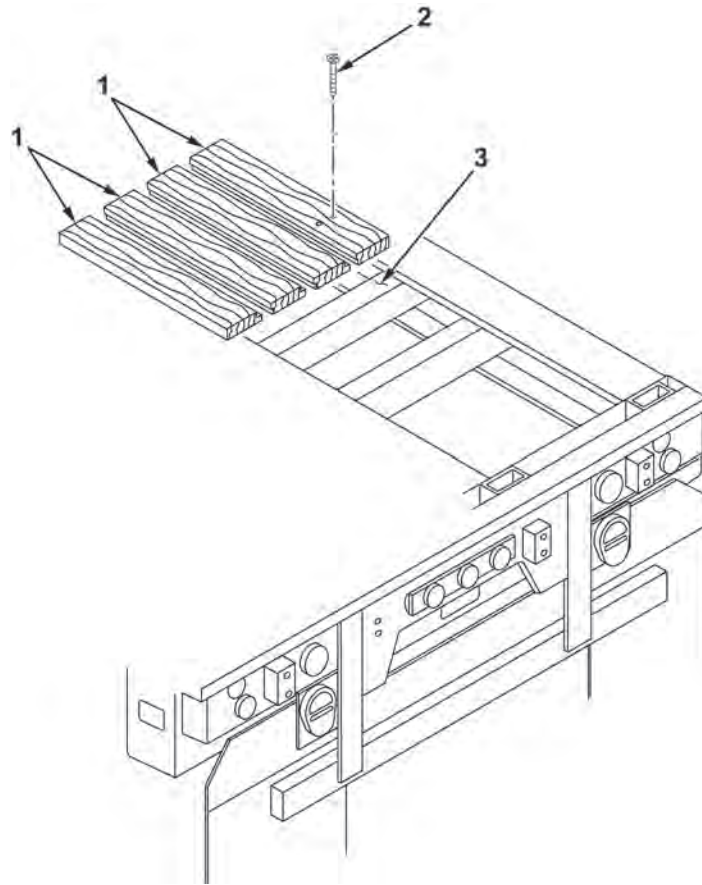
SELF-TAPPING SCREW INSTALLATION - Continued

Figure 4. Floor Deck Boards Installation.

END OF TASK

CARRIAGE BOLT INSTALLATION

NOTE

If numerous holes are in crossmembers from previous board replacements, carriage bolts should be used instead of self-tapping screws in locations that are accessible.

1. Place new board (Figure 5, Item 6) into position on crossmembers (Figure 5, Item 4).
2. Place mounting plate (Figure 5, Item 5) in mounting position on crossmember (Figure 5, Item 4).
3. Use mounting plate (Figure 5, Item 5) as template, and mark board (Figure 5, Item 6) for each hole that needs to be drilled.

WARNING



- Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
 - Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.
4. Drill 3/8-in. hole for each bolt (Figure 5, Item 1) being installed.
 5. Apply linseed oil to newly installed boards (Figure 5, Item 6). Use rag to wipe excess linseed oil from board (Figure 5, Item 6) ends.
 6. Install bolt (Figure 5, Item 1), mounting plate (Figure 5, Item 5), lockwasher (Figure 5, Item 2), and nut (Figure 5, Item 3). Tighten nut (Figure 5, Item 3) until bolt head is fully seated.

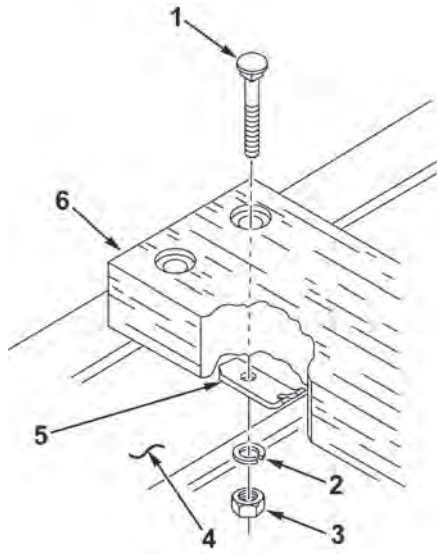
CARRIAGE BOLT INSTALLATION - Continued

Figure 5. Floor Deck Board Bolt.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE STOWAGE BOX REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Suitable Lifting Device, 300 lb (136.08 kg)
Capacity (WP 0138, Table 1, Item 22)

Materials/Parts

Flat Washer Qty: 16 (WP 0120, Figure 31, Item 2)
Locknut Qty: 8 (WP 0120, Figure 31, Item 3)
Nonmetallic Seal
Qty: AR (WP 0120, Figure 31, Item 5)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)
Screw Qty: 8 (WP 0120, Figure 31, Item 1)

References (cont.)

WP 0074
WP 0085

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Basic Issue Items (BII) removed from
stowage box

Personnel Required

(2)

References

TC 9-237

WARNING



- Stowage box weighs 195 lb (88 kg). Use suitable lifting device and two personnel to replace stowage box. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

NOTE

- Replacement of stowage box side panels is a Field Maintenance function (WP 0074). See TC 9-237 for welding instructions.
- Paint entire box before installation of nonmetallic seal if necessary.

REMOVAL

1. Remove 8 locknuts (Figure 1, Item 3), 16 washers (Figure 1, Item 2), and 8 screws (Figure 1, Item 1) from stowage box (Figure 1, Item 4). Discard locknuts (Figure 1, Item 3).
2. Remove stowage box (Figure 1, Item 4) from side panel brackets (Figure 1, Item 6).

END OF TASK**INSTALLATION**

1. Place stowage box (Figure 1, Item 4) into side panel brackets (Figure 1, Item 6).
2. Install stowage box (Figure 1, Item 4), with 8 screws (Figure 1, Item 1), 16 washers (Figure 1, Item 2), and 8 new locknuts (Figure 1, Item 3).
3. Install new nonmetallic seal (Figure 1, Item 5) as needed onto exterior lip of stowage box (Figure 1, Item 4).

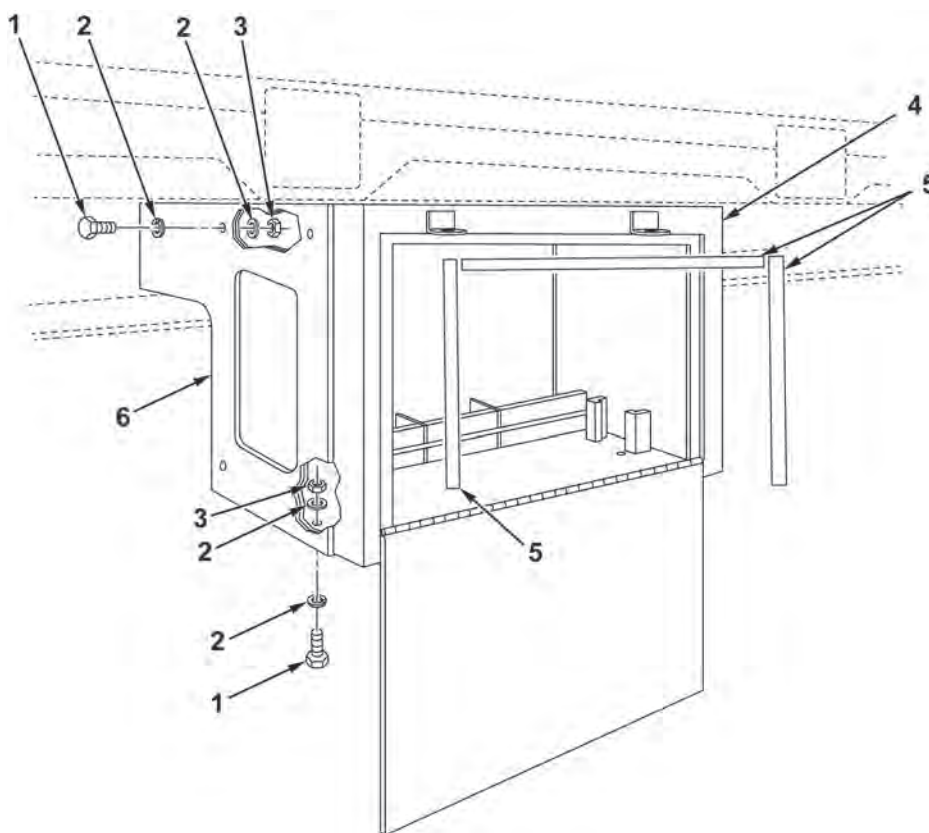


Figure 1. Stowage Box Removal and Installation.

END OF TASK

FOLLOW-ON TASKS

1. Lubricate hinges with oil (WP 0085).
2. Replace BII in stowage box and secure.
3. Connect semitrailer to prime mover (WP 0005).
4. Raise landing legs (WP 0005).
5. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE

STOWAGE BOX SIDE PANELS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Apron (WP 0138, Table 1, Item 1)
Cutting Torch (WP 0138, Table 1, Item 5)
Gloves (WP 0138, Table 1, Item 10)
Grinder (WP 0138, Table 1, Item 11)
Jack (WP 0138, Table 1, Item 12)
Jack Stands (WP 0138, Table 1, Item 13)
Suitable Lifting Device, 300 lb (136.08 kg)
Capacity (WP 0138, Table 1, Item 22)
Welder, MIG (WP 0138, Table 1, Item 28)
Welding Mask (WP 0138, Table 1, Item 29)

Materials/Parts

Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Cloth, Abrasive (WP 0137, Table 1, Item 9)
Flat Washer
Qty: 16 (WP 0120, Figure 31, Item 2)
Locknut Qty: 16 (WP 0120, Figure 31, Item 3)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 32)

Materials/Parts (cont.)

Rag, Wiping (WP 0137, Table 1, Item 36)
Screw
Qty: 8 (WP 0120, Figure 31, Item 1)

Personnel Required

(2)

References

WP 0073

Equipment Condition

Landing legs down (WP 0005)
Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)
Basic Issue Items (BII) removed from
stowage box

WARNING



- Particles from grinding operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.
- Stowage box weighs 195 lb (88 kg). Use suitable lifting device and two personnel to replace stowage box. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Wear welding mask, gloves, and protective apron when welding or using cutting torch. Ensure eye protection is the proper tint for the welding task being performed. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

REMOVAL

1. Remove stowage box (Figure 1, Item 4) from semitrailer frame (WP 0073).
2. Grind off old welds, and prepare surface for welding of two side panel brackets (Figure 1, Item 5) to frame and rail.

END OF TASK

INSTALLATION

1. Ensure all bare metal is painted.
2. Insert four new screws (Figure 1, Item 1) with washers (Figure 1, Item 2) through side panel bracket (Figure 1, Item 5) mounting hole and stowage box (Figure 1, Item 4). Place four more new washers (Figure 1, Item 2) on screws (Figure 1, Item 1) inside stowage box (Figure 1, Item 4), and tighten screws (Figure 1, Item 2) down with four new locknuts (Figure 1, Item 3); repeat for other three mounting locations.
3. Repeat Step 2 for opposite panel if necessary.
4. Position two side panel brackets (Figure 1, Item 5), with stowage box (Figure 1, Item 4) installed in place at frame (beam) and rail.
5. Tack-weld both side panel brackets (Figure 1, Item 5) in place at frame (beam) and rail.
6. Remove four locknuts (Figure 1, Item 3), washers (Figure 1, Item 2), bolts (Figure 1, Item 1), and stowage box (Figure 1, Item 4), leaving side panel brackets (Figure 1, Item 5) tack-welded in place at frame (beam) and rail. Discard locknuts (Figure 1, Item 3).
7. Use continuous weld on each side panel bracket (Figure 1, Item 5) to weld brackets solidly to frame (beam) and rail.
8. Insert four screws (Figure 1, Item 1) with washers (Figure 1, Item 2) through one side panel bracket (Figure 1, Item 5) mounting hole and stowage box (Figure 1, Item 4). Place four more washers (Figure 1, Item 2) on bolts (Figure 1, Item 1) inside stowage box (Figure 1, Item 4), and tighten screws (Figure 1, Item 1) down with four new locknuts (Figure 1, Item 3).
9. Repeat Step 8 for other three mounting locations.

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

10. Lubricate padlocks and hinges to ensure smooth, rust-free operation. Periodically lubricate padlocks and hinges to maintain serviceability.

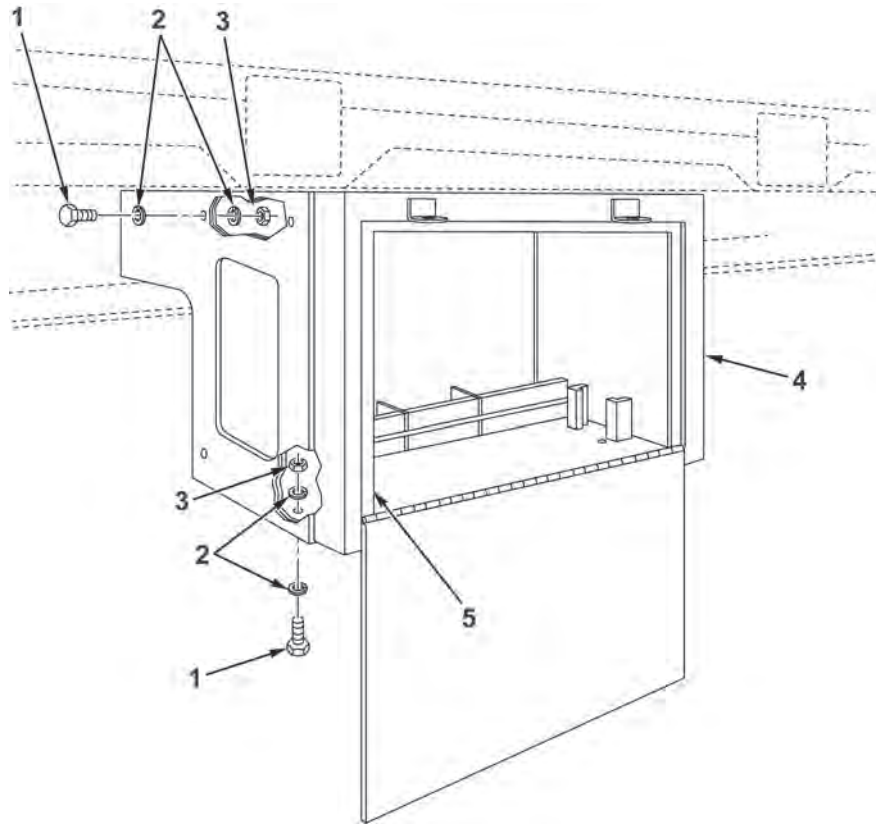
INSTALLATION - Continued

Figure 1. Stowage Box Side Panel Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Replace BII in stowage box and secure.
2. Connect semitrailer to prime mover (WP 0005).
3. Raise landing legs (WP 0005).
4. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
MANIFEST BOX REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Materials/Parts

Locknut Qty: 4 (WP 0121, Figure 32, Item 3)

Equipment Condition

Landing legs down (WP 0005)

REMOVAL

Remove four locknuts (Figure 1, Item 3), washers (Figure 1, Item 2), bolts (Figure 1, Item 4), and manifest box (Figure 1, Item 1) from semitrailer. Discard locknuts (Figure 1, Item 3).

END OF TASK**INSTALLATION**

Install manifest box (Figure 1, Item 1), four bolts (Figure 1, Item 4), washers (Figure 1, Item 2), and new locknuts (Figure 1, Item 3).

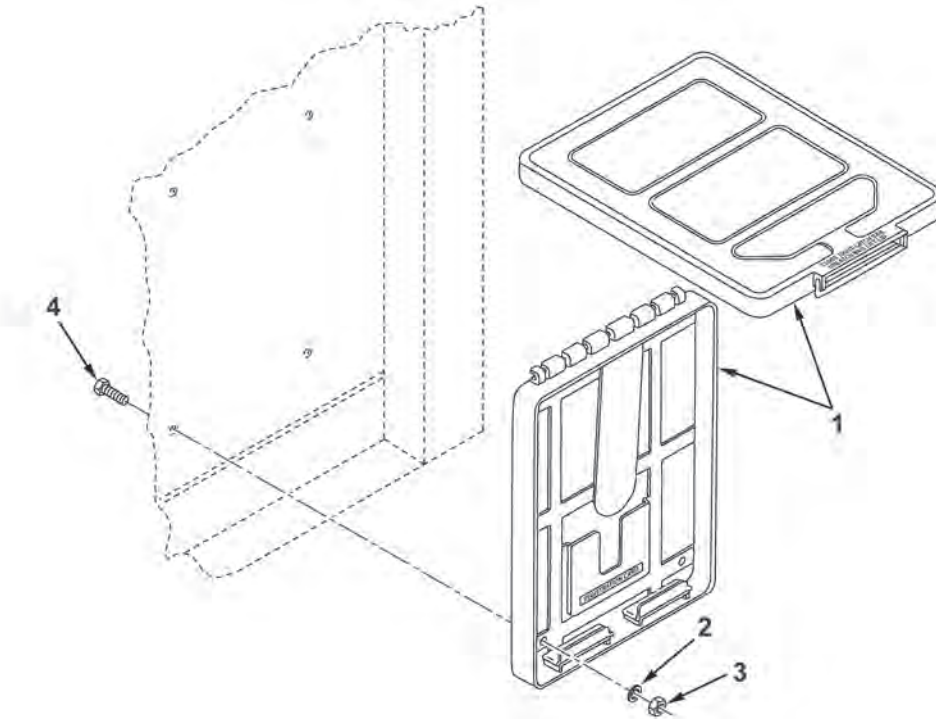


Figure 1. Manifest Box Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
DOCK BUMPERS REPLACEMENT (M871R AND M871A1R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)

Wheels chocked (WP 0005)

Ground boards emplaced (WP 0005)

Materials/Parts

Locknut Qty: 2 (WP 0122, Figure 33, Item 1)

Equipment Condition

Landing legs down (WP 0005)

NOTE

- There are four dock bumpers, and they are removed and installed the same way. These procedures cover one dock bumper.
- The M871R uses locknuts; the M871A1R uses nuts.

REMOVAL

Remove two locknuts (Figure 1, Item 1), bolts (Figure 1, Item 4), four washers (Figure 1, Item 2), and bumper (Figure 1, Item 3). Discard locknuts (Figure 1, Item 1).

END OF TASK**INSTALLATION**

Install bumper (Figure 1, Item 3), four washers (Figure 1, Item 2), two bolts (Figure 1, Item 4), and new locknuts (Figure 1, Item 1).

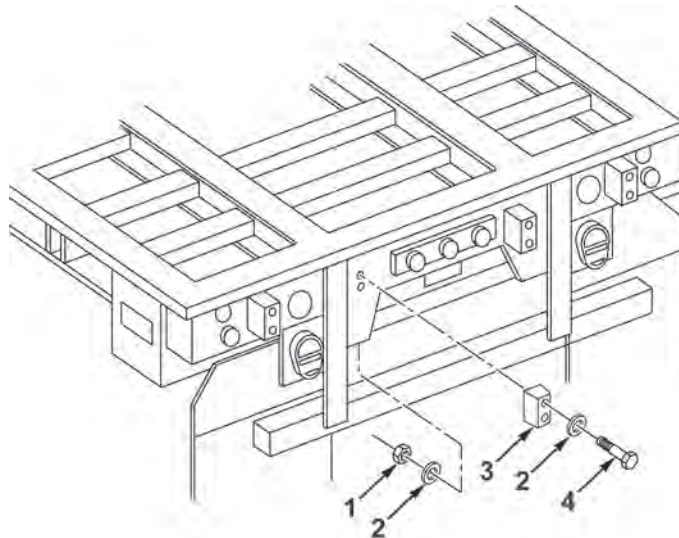


Figure 1. Dock Bumper Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
DOCK BUMPERS REPLACEMENT (M871A2R)

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Locknut Qty: 4 (WP 0122, Figure 33, Item 5)

Equipment Condition

Landing legs down (WP 0005)

WARNING

Chock wheels to prevent semitrailer movement. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

NOTE

There are two dock bumpers, and they are removed and installed the same way. These procedures cover one dock bumper.

REMOVAL

Remove four locknuts (Figure 1, Item 1), bolts (Figure 1, Item 4), washers (Figure 1, Item 3), and bumper (Figure 1, Item 2). Discard locknuts (Figure 1, Item 1).

END OF TASK**INSTALLATION**

Install bumper (Figure 1, Item 2), four washers (Figure 1, Item 3), bolts (Figure 1, Item 4), and new locknuts (Figure 1, Item 1).

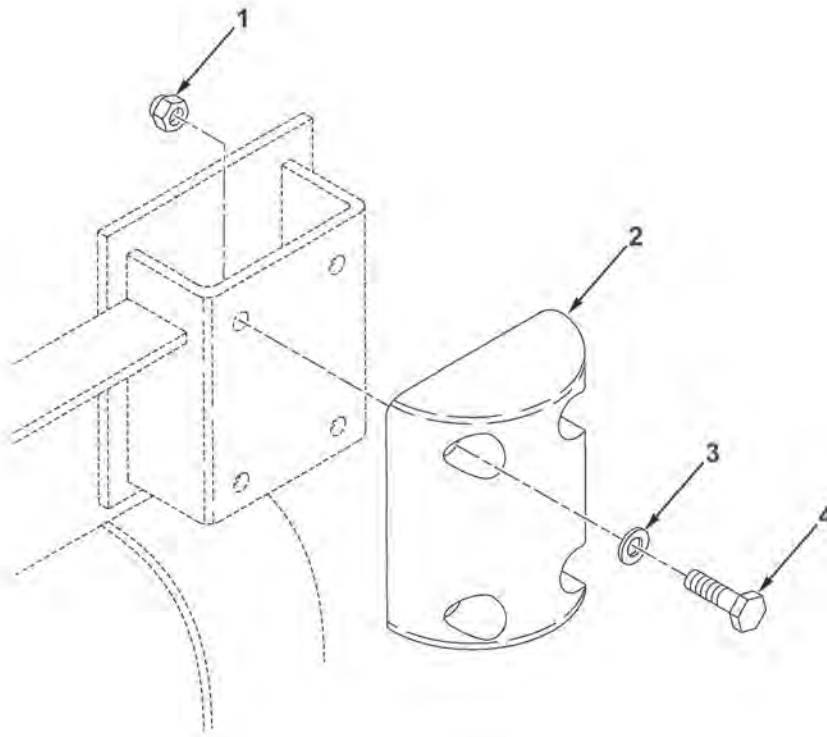


Figure 1. Dock Bumper Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
REFLECTORS REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Antiseize Compound (WP 0137, Table 1, Item 2)
Self-Tapping Screw (WP 0123, Figure 34, Item 2)

Equipment Condition

Landing legs down (WP 0005)

NOTE

There are four amber reflectors and four red reflectors, and they are all removed and installed the same way. These procedures cover one reflector.

REMOVAL

Remove self-tapping screw (Figure 1, Item 2) and amber or red reflector (Figure 1, Item 1) from semitrailer. Discard self-tapping screw (Figure 1, Item 2).

END OF TASK**INSTALLATION****WARNING**

- Antiseize compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.
- DO NOT allow antiseize compound to contact skin or eyes. Use eye protection or face shield and protective gloves. If antiseize compound contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek immediate medical attention in event of injury.

Apply antiseize compound to new self-tapping screw (Figure 1, Item 2), and install amber or red reflector (Figure 1, Item 1).

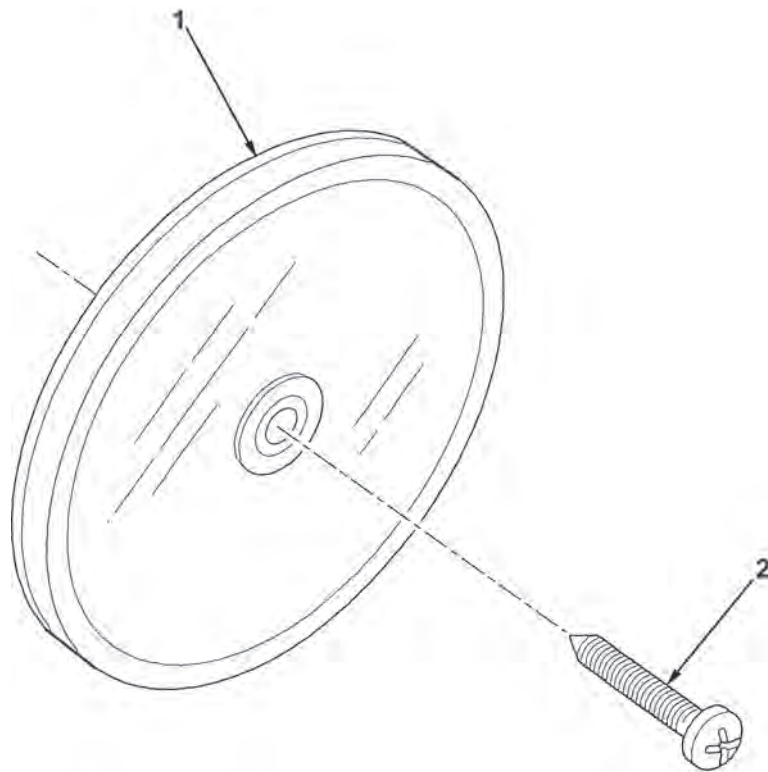
INSTALLATION - Continued

Figure 1. Reflector Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
REFLECTIVE TAPE REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Edge Sealer (WP 0137, Table 1, Item 37)
Tape, Reflective, 1.5 in. Wide Qty: AR
Tape, Reflective, 2.0 in. Wide Qty: AR

Equipment Condition

Landing legs down (WP 0005)

REMOVAL

Remove reflective tape (Figure 1 or 2, Item 1 or 2) from semitrailer as necessary. Discard reflective tape (Figure 1 or 2, Item 1 or 2).

END OF TASK

INSTALLATION

WARNING



- Adhesives and sealing compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.
- Adhesives and sealing compounds bond immediately on contact with eyes, skin, or clothing. DO NOT allow compounds to contact skin or eyes. Use eye protection or face shield and protective gloves. If sealing compound or adhesive contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to Army Petroleum, Oils, and Lubricants (POL) for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.

NOTE

- Ensure that surface area to be taped is clean and dry.
 - There are two widths of rolled reflective tape. Ensure that you apply appropriate reflective tape only to the locations indicated below.
1. Apply 2 in. (5.1 cm) wide red/white reflective tape (Figure 1, Item 2) to both sides of semitrailer as shown.
 2. Apply 1.5 in. (3.8 cm) wide red/white reflective tape (Figure 1, Item 1) along full width of semitrailer rear.
 3. Apply 1.5 in. (3.8 cm) wide red/white reflective tape (Figure 1, Item 1) along full width of rear bumper.
 4. Apply edge sealer to all reflective tape edges.

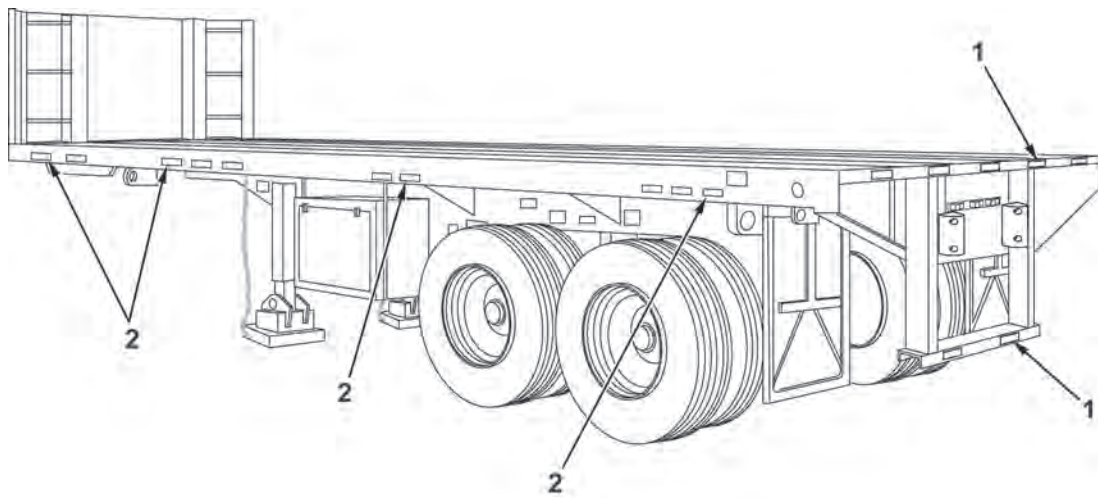
INSTALLATION - Continued

Figure 1. Reflective Tape (Sides and Rear) Removal and Installation.

INSTALLATION - Continued

5. Apply 2 in. (5.1 cm) wide white reflective tape (Figure 2, Item 1) to both sides of bulkhead as shown.

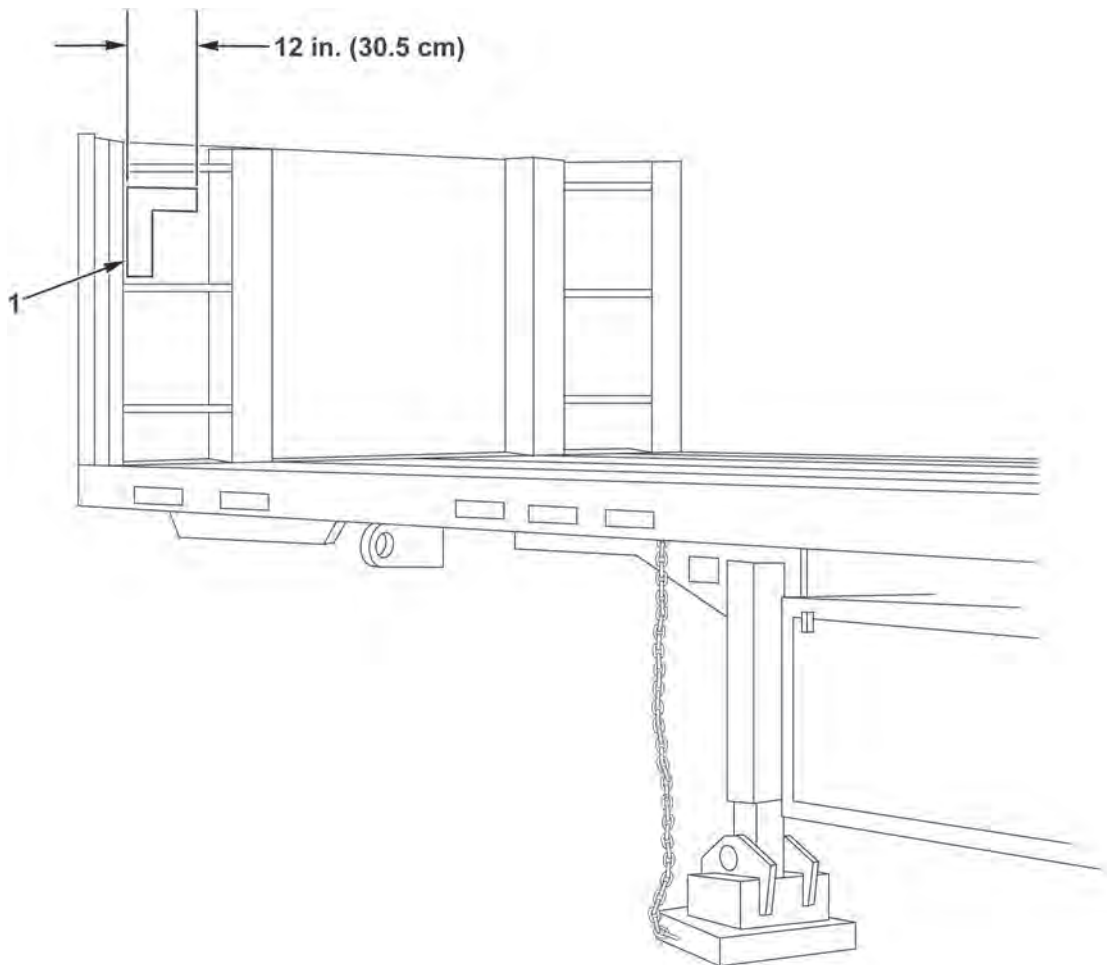


Figure 2. Reflective Tape (Bulkhead) Removal and Installation.

6. Apply edge sealer to all reflective tape edges.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

**FIELD MAINTENANCE
DECALS AND DATA PLATES REPLACEMENT**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Drill (WP 0138, Table 1, Item 7)
Drill set, twist (WP 0138, Table 1, Item 8)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Edge Sealer (WP 0137, Table 1, Item 37)
Rivet, Blind Qty: 8 (WP 0125, Figure 36, Item 2)

Equipment Condition

Landing legs down (WP 0005)

REMOVAL**WARNING**

Particles from drilling operations are hazardous to the eyes. Eye protection is required. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

Items on Figures 1, 2, and 3 correspond with items on Figure 4.

1. Drill out and chisel eight rivets (Figure 2, Item 9) and remove lifting/tiedown data plate (Figures 2, 3, and 4, Item 10) and lubrication data plate (Figures 2 and 4, Item 8) from semitrailer. Discard rivets (Figure 2, Item 9).
2. Remove automatic slack adjusters notice decal (Figures 1 and 4, Item 5), hubs information/warning decal (Figures 1 and 4, Item 6), two Unit Identification Device (UID) decals (Figures 1 and 4, Item 3), inspection decal (Figures 1 and 4, Item 2), gross axle weight rating decal (Figures 1 and 4, Item 4), final inspection decal (Figures 1 and 4, Item 1), and torque decal (Figures 2 and 4, Item 7) from semitrailer. Discard labels.

END OF TASK**INSTALLATION****WARNING**

- Adhesives and sealing compounds are toxic and flammable. Always use in well-ventilated areas, away from heat, sparks, and flames. DO NOT breathe fumes. Continued exposure can cause dizziness and irritate your eyes and throat. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.
- Adhesives and sealing compounds bond immediately on contact with eyes, skin, or clothing. DO NOT allow compounds to contact skin or eyes. Use eye protection or face shield and protective gloves. If sealing compound or adhesive contacts eyes, try to keep eyes open and flush with water for 15 minutes. Failure to comply may result in personnel death or injury. Seek medical attention in the event of an injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to Army Petroleum, Oils, and Lubricants (POL) for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in event of injury.

NOTE

Transcribe pertinent information onto new decals and data plates.

1. Install new torque decal (Figures 2 and 4, Item 7), final inspection decal (Figures 1 and 4, Item 1), gross axle weight rating decal (Figures 1 and 4, Item 4), inspection decal (Figures 1 and 4, Item 2), two UID

INSTALLATION - Continued

decals (Figures 1 and 4, Item 3), hubs information/warning decal (Figures 1 and 4, Item 6), and automatic slack adjusters notice decal (Figures 1 and 4, Item 5) on semitrailer.

2. Install lubrication data plate (Figures 2 and 4, Item 8) and lifting/tiedown data plate (Figures 2, 3, and 4, Item 10) using eight new rivets (Figure 2, Item 9).
3. Apply edge sealer to all decal edges.

END OF TASK

DECALS AND DATA PLATES

1

FINAL INSPECTION COMPLETE
 SERIAL#
 DATE
 INSPECTOR
TRAILER COMPANY

2

TO WRITE ON THIS LABEL USE AN INDELIBLE, PERMANENT INK MARKER, PEN OR PENCIL THAT WILL NOT FADE IN DIRECT SUNLIGHT

ANNUAL VEHICLE INSPECTION LABEL

COMPLETED: MONTH YEAR

A RECORD OF THIS VEHICLE'S ANNUAL VEHICLE INSPECTION REPORT IS MAINTAINED AT: ☐ MOTOR CARRIER ☐ OTHER ENTITY

COMPANY / NAME

STREET ADDRESS

CITY, STATE, ZIP CODE

TELEPHONE MOTOR CARRIER IDENTIFICATION NUMBER

CERTIFICATION: THIS VEHICLE HAS PASSED AN INSPECTION IN ACCORDANCE WITH 49CFR 398.17 THROUGH 398.23.

VEHICLE IDENTIFICATION: IF THE VEHICLE IS NOT READILY, CLEARLY, AND PERMANENTLY MARKED, CHECK ONE AND COMPLETE.

☐ FLEET UNIT NUMBER ☐ LICENSE / REGISTRATION NUMBER

☐ VEHICLE IDENTIFICATION NUMBER ☐ OTHER

8057096

3

4

GROSS AXLE WEIGHT RATING = 20,000 LBS. PER AXLE
 GROSS AXLE WEIGHT RATING = 40,000 LBS. BOTH AXLES

5

NOTICE

This trailer is equipped with automatic slack adjusters. Consult maintenance manual before adjusting.

6

WARNING

SAFETY ALERT! (1) FOLLOW ALL TORQUE REQUIREMENTS. (2) DO NOT USE ANY COMPONENT WITH VISIBLY WORN OR DAMAGED THREADS. FAILURE TO FOLLOW THESE SAFETY ALERTS CAN LEAD TO LOSS OF VEHICLE CONTROL, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR DEATH.

Suspension Torque Requirements
900/440 Series (Decal Part Number 16087-01 Rev. E)

After an initial break in period, approximately 1000 miles, and at least every 4 months periodically thereafter, ALL bolts and nuts should be checked to insure that recommended torque values are being maintained.

Oiled torque values listed are for new fasteners with lubricated threads. It is recommended that new installations be performed with oiled fasteners. For dry threads which have been in service, use the higher torque values which are noted below.

	OILED	DRY
1 1/8-12 UNF.	670 lb-ft	880 lb-ft
1-14 UNF.	540 lb-ft	730 lb-ft
7/8-14 UNF.	500 lb-ft	670 lb-ft
3/4-16 UNF.	220 lb-ft	300 lb-ft
5/8-18 UNF.	130 lb-ft	180 lb-ft

Figure 1. Decals.

DECALS AND DATA PLATES - Continued

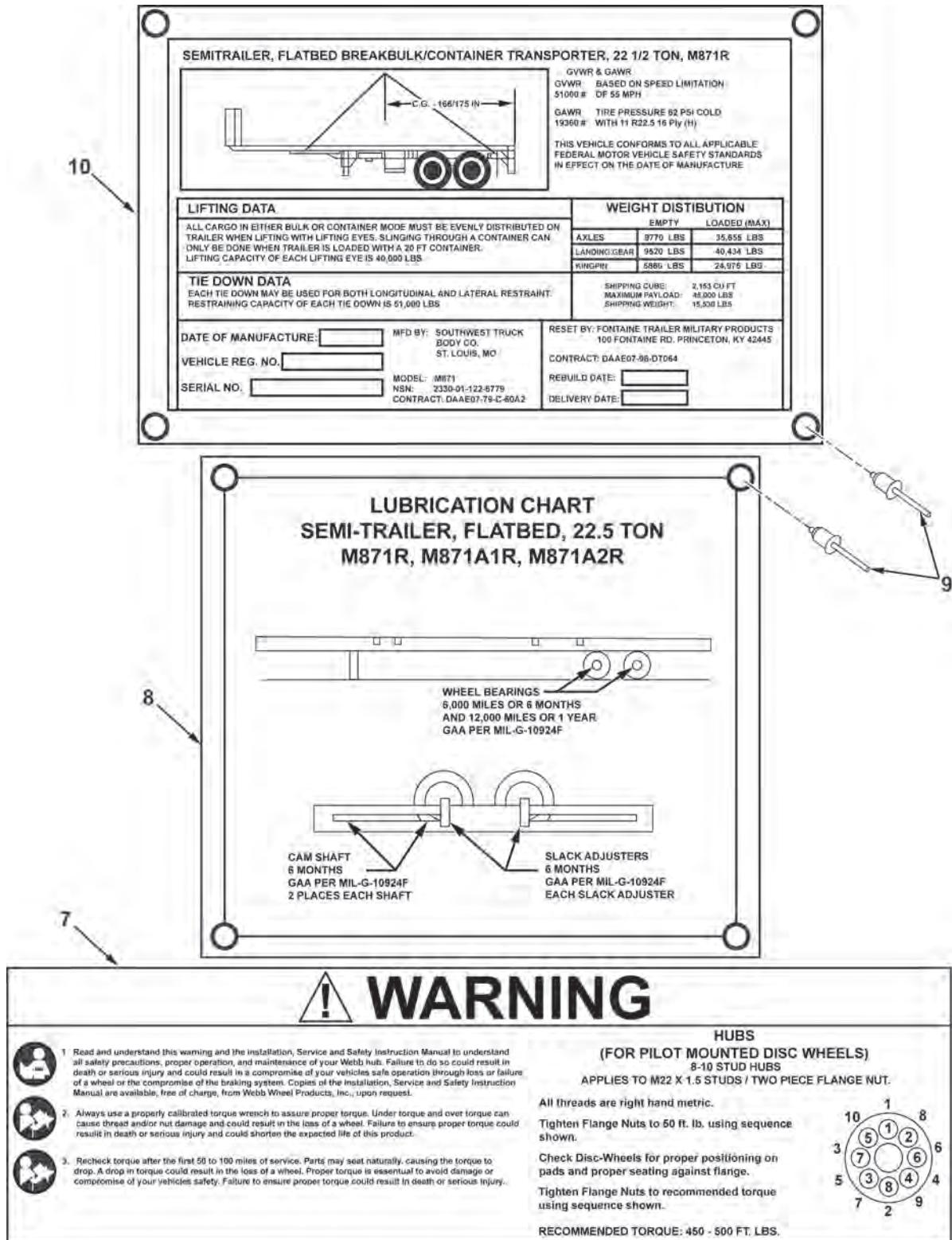


Figure 2. Decal, Data Plates, and Rivets.

10<

Figure 3. Data Plates.

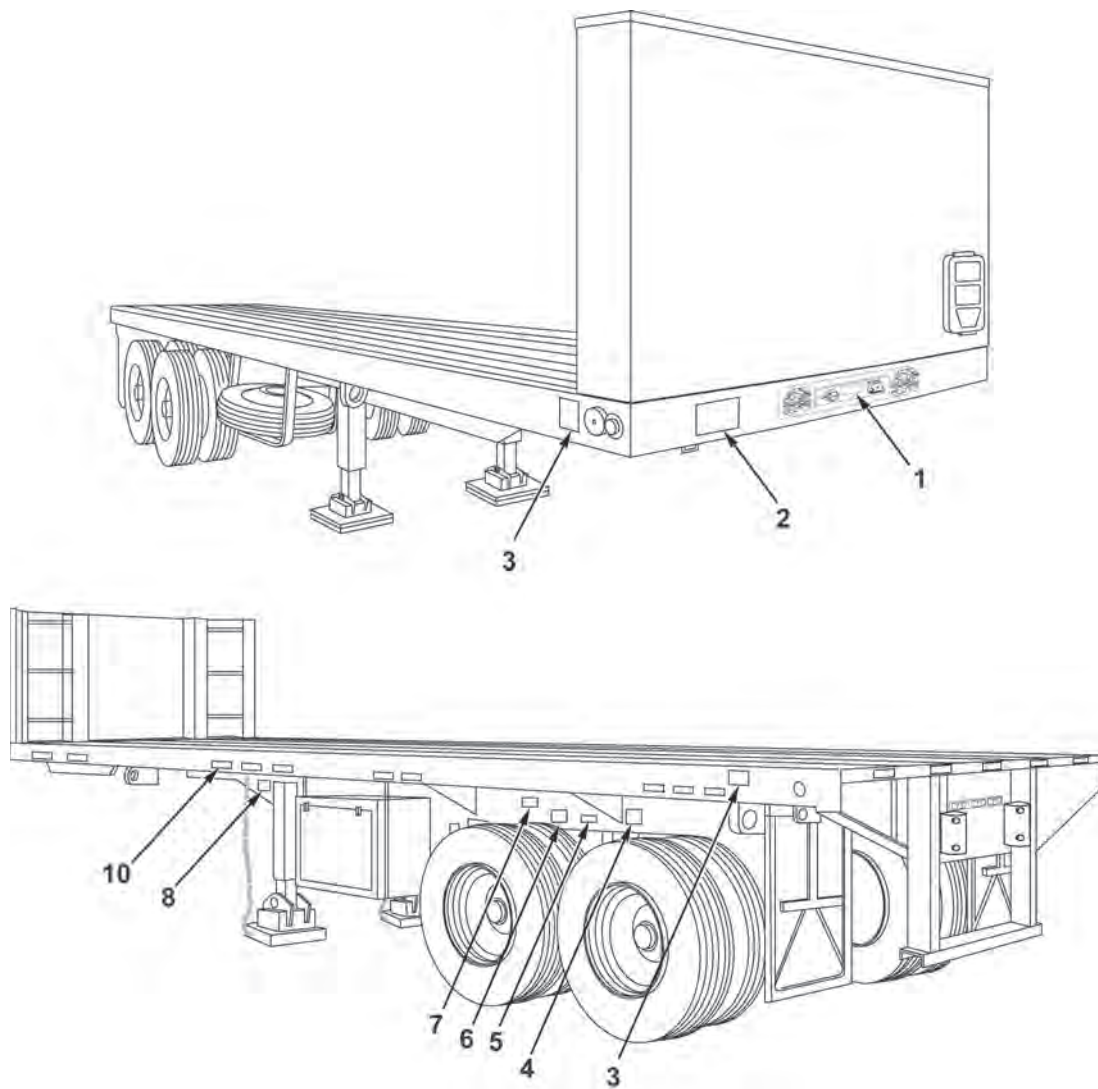
DECALS AND DATA PLATES - Continued

Figure 4. Locations of Decals and Data Plates.

END OF TASK

FOLLOW-ON TASKS

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE
ANTILOCK BRAKE SYSTEM (ABS) WARNING LIGHT REPLACEMENT

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts

Grease, Silicone Insulated Electric Motor
(WP 0137, Table 1, Item 23)
Grommet (WP 0126, Figure 37, Item 2)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Equipment Condition

Landing legs down (WP 0005)

WARNING

Disconnect electrical power from semitrailer before performing any cleaning or maintenance of electrical system. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

REMOVAL

1. Remove grommet (Figure 1, Item 2) from ABS warning light (Figure 1, Item 1). Discard grommet (Figure 1, Item 2).
2. Disconnect connectors from back of ABS warning light (Figure 1, Item 1), and remove ABS warning light (Figure 1, Item 1) from semitrailer.

END OF TASK**INSTALLATION****WARNING**

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

1. Apply silicone electric grease on pins.
2. Connect connectors to back of ABS warning light (Figure 1, Item 1).
3. Install new grommet (Figure 1, Item 2) and ABS warning light (Figure 1, Item 1) at semitrailer bracket.

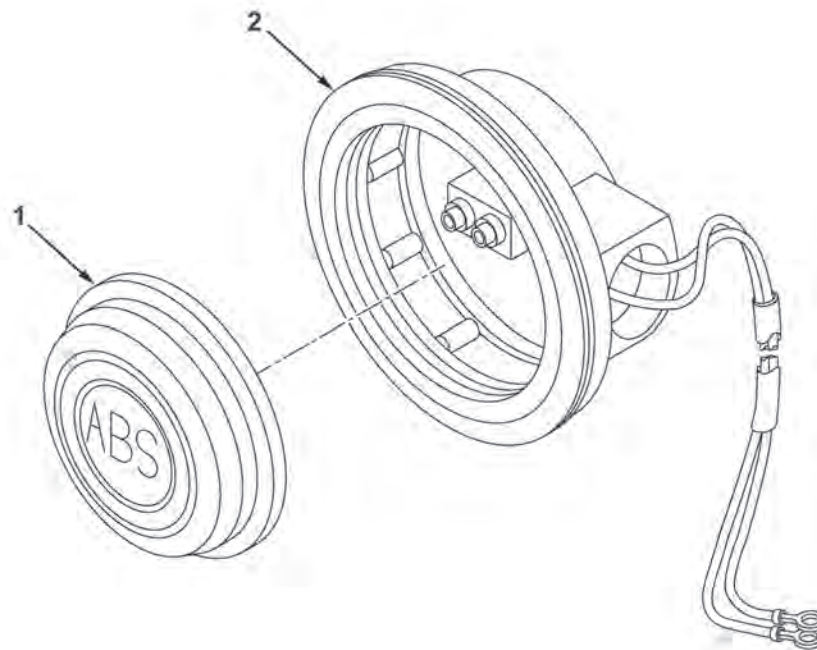
INSTALLATION - Continued

Figure 1. ABS Warning Light Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE HUB MILEAGE METER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)
Torque Wrench 0 to 200 lb-ft (0 to 271 N•m)
(WP 0138, Table 1, Item 26)

Equipment Condition (cont.)

Semitrailer disconnected from prime mover
(WP 0005)
Wheels chocked (WP 0005)
Ground boards emplaced (WP 0005)

Materials/Parts

Nut Assembly (WP 0127, Figure 38, Item 2)

Equipment Condition

Landing legs down (WP 0005)

CAUTION

DO NOT stand on hub mileage meter. Failure to comply may result in equipment damage.

NOTE

When ordering a new hub mileage meter, specify the mileage from the old hub mileage meter.

REMOVAL

Remove nut assembly (Figure 1, Item 2) and hub mileage meter (Figure 1, Item 1) from vehicular bracket (Figure 1, Item 3). Discard nut assembly (Figure 1, Item 2).

END OF TASK**INSTALLATION**

Install hub mileage meter (Figure 1, Item 1) and new nut assembly (Figure 1, Item 2) on vehicular bracket (Figure 1, Item 3). Tighten nut assembly (Figure 1, Item 2) to 15 lb-ft (20 N•m).

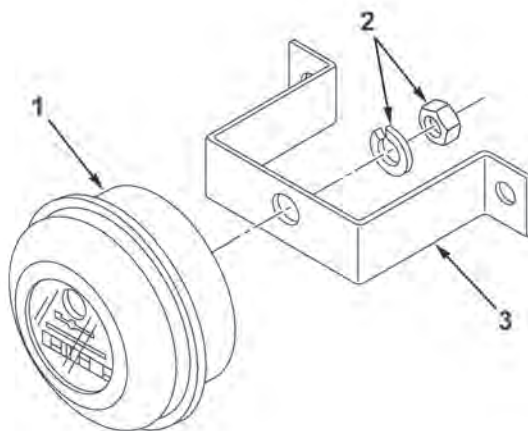


Figure 1. Hub Mileage Meter Removal and Installation.

END OF TASK**FOLLOW-ON TASKS**

1. Connect semitrailer to prime mover (WP 0005).
2. Raise landing legs (WP 0005).
3. Remove and store chock blocks and ground boards (WP 0005).
4. Road test to ensure safe operation.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE PREPARATION FOR STORAGE OR SHIPMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

References

DA Form 2404
DA Form 2407
DA Form 5988-E
DA PAM 750-8
DD Form 1397

References (cont.)

SB 740-98-1
SF 364
TB 43-0209
TM 38-400
TM 43-0139
TM 55-2200-001-12
WP 0022
WP 0029
WP 0085

GENERAL

1. This Work Package (WP) contains requirements and procedures for administrative storage of equipment issued to and in use by Army activities worldwide.
2. The requirements specified herein are necessary to maintain equipment in administrative storage in such a way as to achieve the maximum readiness condition.
3. Equipment placed in administrative storage should be capable of being readied to perform its mission within a 24-hour period, or as otherwise may be prescribed by the approving authority. Before equipment is placed in administrative storage, current Preventive Maintenance Checks and Services (PMCS) must be completed and deficiencies corrected.
4. Report equipment in administrative storage as prescribed for all reportable equipment.
5. Perform inspections, maintenance services, and lubrication as specified herein.
6. Records and reports to be maintained for equipment in administrative storage are those prescribed by DA PAM 750-8 for equipment in use.
7. A 10 percent variance is acceptable on time, running hours, or mileage used to determine the required maintenance actions.
8. Accomplishment of applicable PMCS, as mentioned throughout this WP, will be on a quarterly basis.

DEFINITION OF ADMINISTRATIVE STORAGE

The placement of equipment in administrative storage can be for short periods of time when a shortage of maintenance effort exists. Items should be ready for use within the time factors as determined by the directing authority. During the storage period, appropriate maintenance records will be kept.

PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE

Storage Site

1. Select the best available site for administrative storage. Separate stored equipment from equipment in use. Conspicuously mark the area "ADMINISTRATIVE STORAGE."
2. Covered space is preferred. When sufficient covered space for all items to be stored is not available, priority should be given to items which are most susceptible to deterioration from the elements. SB 740-98-1 should be used as a guide for establishing which items are most susceptible to deterioration.
3. Open sites should be improved hardstand, if possible. Unimproved sites should be firm, well-drained, and kept free of excessive vegetation.

Storage Plan

1. Store equipment so as to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercising. Anticipate removal or deployment problems and take suitable precautions.
2. Take into account environmental conditions, such as extreme heat or cold, high humidity, blowing sand or loose debris, soft ground, mud, and heavy snow, and take adequate precautions.
3. Establish a fire plan and provide for adequate fire fighting equipment and personnel.

Maintenance Services and Inspection

1. Prior to storage, perform the next scheduled Field PMCS (WP 0022).
2. Inspect and approve the equipment prior to storage. DO NOT place equipment in storage in a nonmission capable condition.
3. Lubricate equipment in accordance with applicable lubrication instructions located in WP 0085.

END OF TASK

BASIC ISSUE ITEMS (BII) AND ADDITIONAL AUTHORIZATION LIST (AAL) ITEMS

1. Process BII and AAL items simultaneously with the major item to which they are assigned.
2. If possible, store BII and AAL items with the major item.
3. If stored apart from the major item, mark BII and AAL items with tags indicating the major item, its registration or serial number, and location, and store in protective-type closures. In addition, place a tag or list indicating the location of the removed items in a conspicuous place on the major item.

END OF TASK

CORRECTION OF SHORTCOMINGS AND DEFICIENCIES

Correct all shortcomings and deficiencies prior to storage, or obtain a waiver from the approving authority.

END OF TASK

GENERAL CLEANING, PAINTING, AND PRESERVATION

CAUTION

DO NOT direct water or steam, under pressure, against electrical wires or any exterior opening. Failure to comply may result in equipment damage.

GENERAL CLEANING, PAINTING, AND PRESERVATION - Continued

1. Clean all equipment of dirt, grease, and other contaminants in accordance with applicable provisions of this manual. DO NOT use vapor degreasing. Remove foreign objects that are wedged in tire treads.
2. Remove rust and damaged paint by scraping, wire brushing, sanding, or buffing. Sand to a smooth finish and spot paint as necessary. Refer to TM 43-0139 and TB 43-0209.

WARNING

Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

3. After cleaning and drying, immediately coat unpainted wear surfaces with oil or grease as appropriate (WP 0085).

NOTE

Air circulation under draped covers reduces deterioration from moisture and heat.

4. Place equipment and provide blocking or framing to allow ventilation and water drainage. Support cover away from item surfaces, which may rust, rot, or mildew.

END OF TASK**CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE****Maintenance Services**

After equipment has been placed in administrative storage, inspect, service, and exercise as specified in this manual.

Inspection

Inspection will usually be visual and must consist of at least a walk-around examination of all equipment to detect any deficiencies. Inspect equipment in open storage weekly and equipment in covered storage monthly. Inspect all equipment immediately after any severe storm or environmental change. The following are examples of things to look for during a visual inspection:

1. Low or flat tires
2. Condition of preservatives, seals, and wraps
3. Corrosion or other deterioration
4. Missing or damaged parts
5. Water in components
6. Any other readily recognizable shortcomings or deficiencies

CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE - Continued**Repair During Administrative Storage**

Keep equipment in an optimum state of readiness. Accomplish the required services and repairs as expeditiously as possible. Whenever possible, perform all maintenance on-site.

Exercising

Exercise equipment in accordance with Table 1 and the following instructions:

1. **Vehicle Major Exercise.** Depreserve equipment by removing only that material restricting exercise. Close all drains, remove blocks, and perform all before-operation checks. Couple semitrailer to prime mover, and drive for at least 25 miles (40 km). Make several right and left 90-degree turns. Make several hard braking stops without skidding. Do the following during exercising when it is convenient and safe: operate all other functional components and perform all during- and after-operation checks.
2. **Scheduled Services.** Scheduled services will include inspection per Inspection in this WP, and will be conducted in accordance with Table 1. Lubricate in accordance with instructions in WP 0085.
3. **Corrective Action.** Immediately take action to correct shortcomings and deficiencies noted. Record inspection and exercise results on DA Form 2404/DA Form 5988-E. Record and report all maintenance actions on DA Form 2407. After exercising, restore the preservation to the original condition.

Table 1. Exercise Schedule.

WEEKS	2	4	6	8	10	12	14	16	18	20	22	24
PMCS						X						X
SCHEDULED SERVICES		X		X		X		X		X		
MAJOR EXERCISE												X

Rotation

To ensure utilization of all assigned materiel, rotate items in accordance with rotational plan to keep equipment in operational condition and reduce maintenance efforts.

END OF TASK**PROCEDURES FOR COMMON COMPONENTS AND MISCELLANEOUS ITEMS****Tires**

Visually inspect tires during each walk-around inspection. This inspection includes checking tires with a tire gauge. Inflate, repair, or replace as necessary those found to be low, damaged, or excessively worn. Mark inflated and repaired tires with a crayon for checking at the next inspection.

Seals

Seals may develop leaks during storage or shortly thereafter. If leaking persists, refer to the applicable maintenance section in this manual for corrective maintenance procedures.

END OF TASK

REMOVAL OF EQUIPMENT FROM ADMINISTRATIVE STORAGE**Activation**

Restore the equipment to normal operating condition in accordance with the instructions contained in WP 0029.

Servicing

Resume the maintenance service schedule in effect at the commencement of storage, or service the equipment before the scheduled dates in order to produce a staggered maintenance workload.

END OF TASK**PREPARATION OF EQUIPMENT FOR SHIPMENT**

1. Refer to TM 55-2200-001-12 and TM 38-400 for additional instructions on processing, storage, and shipment of materiel.
2. Semitrailers that have been removed from storage for shipment do not have to be reprocessed if they will reach their destination within the administrative storage period. Reprocess only if inspection reveals any corrosion or if anticipated in-transit weather conditions make it necessary.
3. When a semitrailer is received that has already been processed for domestic shipment, as indicated on DD Form 1397, the semitrailer does not have to be reprocessed for storage unless corrosion and deterioration are found during the inspection upon receipt. List on SF 364 all discrepancies found because of poor preservation, packaging, packing, marking, handling, loading, storage, or excessive preservation. Repairs that cannot be handled by the receiving unit must have tags attached listing needed repairs. A report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE GENERAL MAINTENANCE INSTRUCTIONS

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's
(WP 0138, Table 1, Item 24)

Materials/Parts (cont.)

Rag, Wiping (WP 0137, Table 1, Item 36)
Tag, Marker (WP 0137, Table 1, Item 41)

Materials/Parts

Brush, Scrub (WP 0137, Table 1, Item 3)
Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Cloth, Abrasive (WP 0137, Table 1, Item 9)
Corrosion Preventive Compound
(WP 0137, Table 1, Item 14)
Detergent (WP 0137, Table 1, Item 18)
Linseed Oil, Boiled (WP 0137, Table 1, Item 26)

References

MIL-DTL-53072
TB 43-0139
TB 43-0209
TB 43-0242
TB 9-2510-242-40
TM 9-214
WP 0085

WARNING



For service and repair tasks on the semitrailer, ground boards and wheel chocks should be used to ensure safe coupling and prevent semitrailer movement. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

GENERAL

1. This Work Package (WP) contains general shop practices and specific methods you must be familiar with to properly maintain your semitrailer. You should read and understand these practices and methods before performing any maintenance tasks.
2. Before beginning a task, find out how much repair, modification, or replacement is needed to fix the equipment. Sometimes the reason for equipment failure can be seen right away, and complete teardown is not necessary. Disassemble equipment only as far as necessary to repair or replace damaged or broken parts.
3. Resources are not listed in the initial setup unless they apply to the procedure.
4. All tags and forms attached to equipment must be checked to learn the reason for equipment's removal from service. Modification Work Orders (MWOs) and Technical Bulletins (TBs) must also be checked for equipment changes and updates.
5. In some cases, a part may be damaged by removal. If the part appears to be good, and other parts behind it are not defective, leave it on and continue with the procedure. Here are a few simple rules:
 - a. DO NOT remove dowel pins or studs unless loose, bent, broken, or otherwise damaged.
 - b. DO NOT remove bearings or bushings unless damaged. If you need to remove them to access parts behind, pull bearings and bushings out carefully.
 - c. Replace all gaskets, seals, preformed packings, lockwashers, cotter pins, and other locking hardware.
 - d. Ensure all parts are lubricated as specified in WP 0085.

END OF TASK**WORK SAFETY**

1. Observe all WARNINGS, CAUTIONS, and NOTES. Always use power tools carefully.
2. Protect yourself against injury. Wear protective gear such as safety eye protection or lenses, safety shoes, rubber apron, and gloves.
3. When lifting heavy parts, have someone help you. Ensure that lifting/stabilizing equipment is working properly, is suitable for the assigned task, and is secure against slipping.
4. All maintenance should be performed with:
 - a. Prime mover in Neutral with parking brake engaged, if attached
 - b. Prime mover engine stopped, if attached
 - c. Chocked front and rear of tires
 - d. Ground boards emplaced

END OF TASK

CLEANING INSTRUCTIONS**WARNING**

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

CAUTION

DO NOT use high-pressure water or steam to clean semitrailer. Use only low-pressure water and bristled brushes. Be especially careful when cleaning electrical system components to include lighting. Failure to comply may result in equipment damage.

CLEANING INSTRUCTIONS - Continued

1. **General.** Cleaning instructions will be the same for a majority of parts and components that make up the semitrailer. The following should apply to all cleaning operations:
 - a. Clean all parts before inspection, after repair, and before assembly.
 - b. Keep hands free of grease, which can collect dust, dirt, and grit.
 - c. After cleaning, all parts should be covered or wrapped to protect them from dust and dirt. Parts that are subject to rust should be lightly oiled.
2. **Castings, Forgings, and Machined Metal Parts.**
 - a. Clean inner and outer surfaces with solvent cleaning compound.
 - b. Remove grease and accumulated deposits with a stiff bristle brush.

WARNING

Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. To prevent injury, user must wear eye protection or face shield. Ensure air stream is directed away from user and other personnel in the area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

- c. Clear all threaded holes with compressed air to remove dirt and cleaning fluids.

CLEANING INSTRUCTIONS - Continued

WARNING



- General purpose liquid nonionic detergent (MIL-D-16791) may be irritating to the eyes and skin. Wear protective clothing, gloves, and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use general purpose liquid nonionic detergent (MIL-D-16791) in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: seek immediate medical attention. If person is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. If person is unconscious, or convulsing, DO NOT induce vomiting or give anything by mouth. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-D-16791 detergent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed and store in a cool, dry place when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.

CAUTION

DO NOT wash grease seals, electrical harnesses, and flexible hoses with solvent cleaning compound or mineral spirits. Failure to comply may result in equipment damage.

3. **Grease Seals, Electrical Cables, and Flexible Hoses.** Wash electrical cables and flexible hoses with a solution of detergent and water and wipe dry with clean rags.
4. **Bearings.** Clean bearings in accordance with TM 9-214.

END OF TASK

INSPECTION INSTRUCTIONS**NOTE**

- All damaged areas should be marked for repair or replacement.
- All components and parts must be carefully checked to determine if they are serviceable for use, can be repaired, or must be scrapped.

1. Inspect drilled and tapped (threaded) holes for the following:
 - a. Wear, distortion, cracks, and any other damage in or around hole.
 - b. Threaded areas for wear, distortion (stretching), and evidence of cross-threading.
2. Inspect metal lines, flexible lines (hoses), and metal fittings for the following:
 - a. Metal lines for sharp kinks, cracks, bad bends, and dents.
 - b. Flexible lines for fraying, evidence of leakage, and loose metal fittings or connectors.
 - c. Metal fittings and connectors for thread damage and worn or rounded hex heads.
3. Inspect castings, forgings, and machined metal parts for the following:
 - a. Machined surfaces for nicks, burrs, raised metal, wear, and other damage.
 - b. Inner and outer surfaces for breaks and cracks.
4. Inspect bearings in accordance with TM 9-214.

END OF TASK**REPAIR INSTRUCTIONS**

Any repair procedure peculiar to a specific part or component is covered in the section relating to that item. After repair, clean all parts thoroughly to prevent dirt, metal chips, or other foreign material from entering any working parts.

1. Repair casting, forgings, and machined metal parts using the following instructions:
 - a. Repair minor cracked casting or forgings in accordance with TB 9-2510-242-40.
 - b. Repair minor damage to machined surfaces with a fine mill file or an abrasive cloth dipped in cleaning compound.
 - c. Replace any deeply nicked machined surface that could affect the assembly operation.
 - d. Repair minor damage to threaded capscrew holes with thread tap of same size to prevent cutting oversize.
2. After repair, clean all parts thoroughly to prevent dirt, metal chips, or other foreign material from entering any working parts.

END OF TASK

TAGGING WIRES AND HOSES

1. As soon as the first wire, hose, or tube is disconnected, write number "1" on two tags. Secure one tag to the wire, hose, or tube and the other tag to the terminal, nipple, or fitting. After disconnecting the second wire, hose, or tube, write number "2" on two tags. Secure one tag to the wire, hose, or tube, and the second tag to the terminal, nipple, or fitting. Do the same for all wires, hoses, and tubes.
2. Note which numbers you used, in pencil, on the illustrations in this manual. This will help you to accurately re-tag the items.
3. Remove all tags when finished.

END OF TASK

CORROSION PROTECTION

1. **General Instructions.**
 - a. To ensure a long operational life for the semitrailer, the following is presented to assist maintenance personnel. This is not meant to supersede or replace current support operations or authorized publications. Worldwide operations present many environmental impacts on the semitrailer from salt water to ice/snow-melting chemicals.
 - b. Areas of conflict have their own ways of ventilating and damaging the semitrailer. All these impacts add up to shortened operational life.
2. **Tips.**
 - a. Keep the semitrailer clean, which will allow for more complete inspection of welds and components. Use low-pressure water, cleaning detergent, and brushes for cleaning.
 - b. Flush out undercarriages, suspensions, and wheel ends with clean, low-pressure water if operating in a salt environment (especially when fording) as soon as the mission allows.
 - c. Keep debris out of wheel ends and twistlock pockets.
 - d. Annually clean deck wood and roll or spray on boiled linseed oil. Apply to top areas of deck wood.
 - e. Protect all exterior areas from rust. Clean off rust, prime metal, and paint area.
 - f. Application of 10 wt. oil at oil can points as specified by WP 0085 will help protect components and ensure they will work when needed.
 - g. Keep bolster plate drain holes free of grease and debris so they drain/air out freely to prevent interior corrosion.
3. **Corrosion Protection.** If paint has worn off or damage/repair has taken it off the undercarriage, frame, fillets, gussets, or any other protected area, re-coat with corrosion preventive compound and CARC paint. Refer to MIL-DTL-53072 for CARC painting instructions.
4. **Kingpin and Bolster Plate.** If the kingpin is replaced, inspect the interior structure for rust. Clean and protect the interior with corrosion preventive compound; do not plug up bolster plate drain holes. Ensure all welds are protected inside and out. Inspect the kingpin and bolster plate in accordance with PMCS requirements.

CORROSION PROTECTION - Continued

5. **Protection Scheduling.** It is a good idea to periodically take a look at the paint, especially after off-road operations. The following is suggested:
- a. Monthly: Examine the condition of the paint.
 - b. Annually: Clean rusted area down to bare metal. Refer to TB 43-0209, TB 43-0242, and TB 43-0139 for surface preparation. Apply corrosion preventive compound and top coat with CARC paint. Refer to MIL-DTL-53072 for CARC painting instructions.
 - c. If operating in a salt or road chemical environment, you should wash semitrailer with clean, low-pressure water, dry, prime, and paint unprotected areas if conditions permit.

END OF TASK**END OF WORK PACKAGE**

FIELD MAINTENANCE LUBRICATION INSTRUCTIONS

INITIAL SETUP:

Materials/Parts

Cleaning Solvent, Type II
(WP 0137, Table 1, Item 6)
Grease, Automotive and Artillery
(WP 0137, Table 1, Item 19)
Oil: Lubricating, 10W Grade, MIL-PRF-2104
(WP 0137, Table 1, Item 30)
Oil: Lubricating, 30W Grade, MIL-PRF-2104
(WP 0137, Table 1, Item 32)
Oil, Lubricating, Engine
(WP 0137, Table 1, Item 33)

Materials/Parts (cont.)

Oil: Lubricating, OEA, MIL-PRF-46167
(WP 0137, Table 1, Item 32)
Rag, Wiping (WP 0137, Table 1, Item 36)

References

DA PAM 750-8
FM 9-207
TB 43-0209
TM 9-214
TM 43-0139

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

GENERAL

This Work Package (WP) contains lubrication instructions showing location, intervals, and proper materials for lubricating the semitrailer. These instructions are mandatory.

DETAILED LUBRICATION INFORMATION**WARNING**

- Solvent cleaning compound MIL-PRF-680 may be irritating to the eyes and skin. Wear protective gloves and eye protection. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Use solvent cleaning compound MIL-PRF-680 in a well-ventilated area. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract. May cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: DO NOT induce vomiting. Seek immediate medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- MIL-PRF-680 solvent is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Use mechanical ventilation whenever product is used in a confined space, heated above ambient temperatures, or agitated. Keep container sealed when not in use. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel death or injury. Seek medical attention in event of injury.
- Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

CAUTION

DO NOT lubricate suspension system. Failure to comply may result in equipment damage.

1. Clean lubrication points, grease fittings, and surrounding areas before applying lubricant. Clean all lubrication points after lubricating to prevent accumulation of foreign matter. Clean and lubricate bearings as specified in TM 9-214.
2. Maintain record of vehicle lubrication, and report discrepancies noted during lubrication. Refer to DA PAM 750-8 for maintenance forms and procedures to record and report findings.

SPECIFIC LUBRICATION INSTRUCTIONS**WARNING**

Wipe excess lubricant from area of brake shoe linings to prevent contamination of linings. Replace linings that have been contaminated with lubricant to prevent brake malfunction. Failure to comply may result in personnel death or injury, or equipment damage. Seek medical attention in event of injury.

CAUTION

- Keep all lubricants in closed containers, and store in a clean, dry place away from extreme heat. Keep container covers clean, and do not allow dust, dirt, or other foreign material to mix with lubricants. Keep all lubrication equipment clean and ready for use. Failure to comply may result in equipment damage.
 - Keep all external parts of equipment not requiring lubrication clean of lubricants. Grease streaks on the outside or inside of the wheel may indicate overpacking of the grease, an improperly installed grease seal, damage to the axle end, loose hardware, or gasket damage. Failure to comply may result in equipment damage.
1. Refer to FM 9-207 for lubrication instructions in cold weather.
 2. After operation in mud or in sandy or dusty conditions, or when mission allows, clean and inspect all points of lubrication for fouled lubricants. Change lubricants as required.

LUBRICATION CHART AND DIAGRAMS

1. Refer to Table 1. Intervals are based on normal operation. Adjust to compensate for abnormal and severe conditions or contaminated lubricants. During inactive periods, intervals may be extended commensurate with adequate preservation. Locations of lubrication points on semitrailer are shown on Figures 1 through 4.
2. Before lubrication, clean fittings using cleaning compound. Dry before lubricating.
3. Relubricate after washing or fording as necessary.

LUBRICATION CHART AND DIAGRAMS - Continued

Table 1. Lubrication Chart.

LUBRICATION POINTS	INTERVAL	LUBRICATION TYPE/ SPECIAL INSTRUCTIONS/ MAINTENANCE LEVEL
ABS sensor body and spring clip	When replaced or removed from clip	GAA, light coat on sensor body, wipe off excess. When removed from spring clip, clean off old grease and apply a new light coat. (F)
Automatic slack adjuster	Semiannually or every 6,000 miles (9,656 km)	GAA, lubrication fittings. (F) OE/HDO-10, hinge/latch, oil can points. (F)
Stowage box and padlocks	Monthly or every 1,000 miles (1,609 km)	OE/HDO-10, hinge/latch, oil can points. (C)
Twistlocks (8)	Monthly or every 1,000 miles (1,609 km)	Clean, oil can point OE/HDO-10 for housing. (C) GAA, lubrication fittings. (F)
Tiedown rings Cargo (36) Ammo (4) Lift/tiedown (10)	Monthly or every 1,000 miles (1,609 km)	OE/HDO-10, oil can points. (C)
Landing gear, shoes, swing pins, and crank handle	Monthly or every 1,000 miles (1,609 km)	OE/HDO-10, oil can points. (C)
All receptacle pins and connectors	When taken apart/replaced/cleaned	Silicone electric grease. Clean and apply a thin coat. (F)
Kingpin and bolster plate	Monthly or every 1,000 miles (1,609 km)	GAA, clean, then apply thin coat on kingpin and bolster plate. (C) Ensure drain holes are not plugged.
Sling eye pockets (M871R and M871A1R)	Quarterly or every 3,000 miles (4,827 km)	GAA. (C)
Sling eye locking latches (M871R and M871A1R)	Monthly or every 1,000 miles (1,609 km)	GAA. (C)
Gladhand springs and bracket	Monthly or every 1,000 miles (1,609 km)	OE/HDO-10, oil can points. (C)
Wheel bearings and seals	Triennial or every 36,000 miles (57,935 km)	GAA, clean, inspect, and repack with clean GAA. (F) Replace seals. (F) Never reuse seals.
Brake bushings, rollers, anchor pins, S-camshaft lobes, spider face, splines	Triennial or every 36,000 miles (57,935 km)	GAA, light coat, wipe off excess. (F)

LUBRICATION CHART AND DIAGRAMS - Continued

Table 1. Lubrication Chart - Continued.

LUBRICATION POINTS	INTERVAL	LUBRICATION TYPE/ SPECIAL INSTRUCTIONS/ MAINTENANCE LEVEL
S-camshaft support bracket	Semiannually or every 6,000 miles (9,656 km)	GAA, lubrication fittings. (F)
Spindles, cam follower shaft, journals	Triennial or every 36,000 miles (57,935 km)	GAA, light coat, wipe off excess. (F)

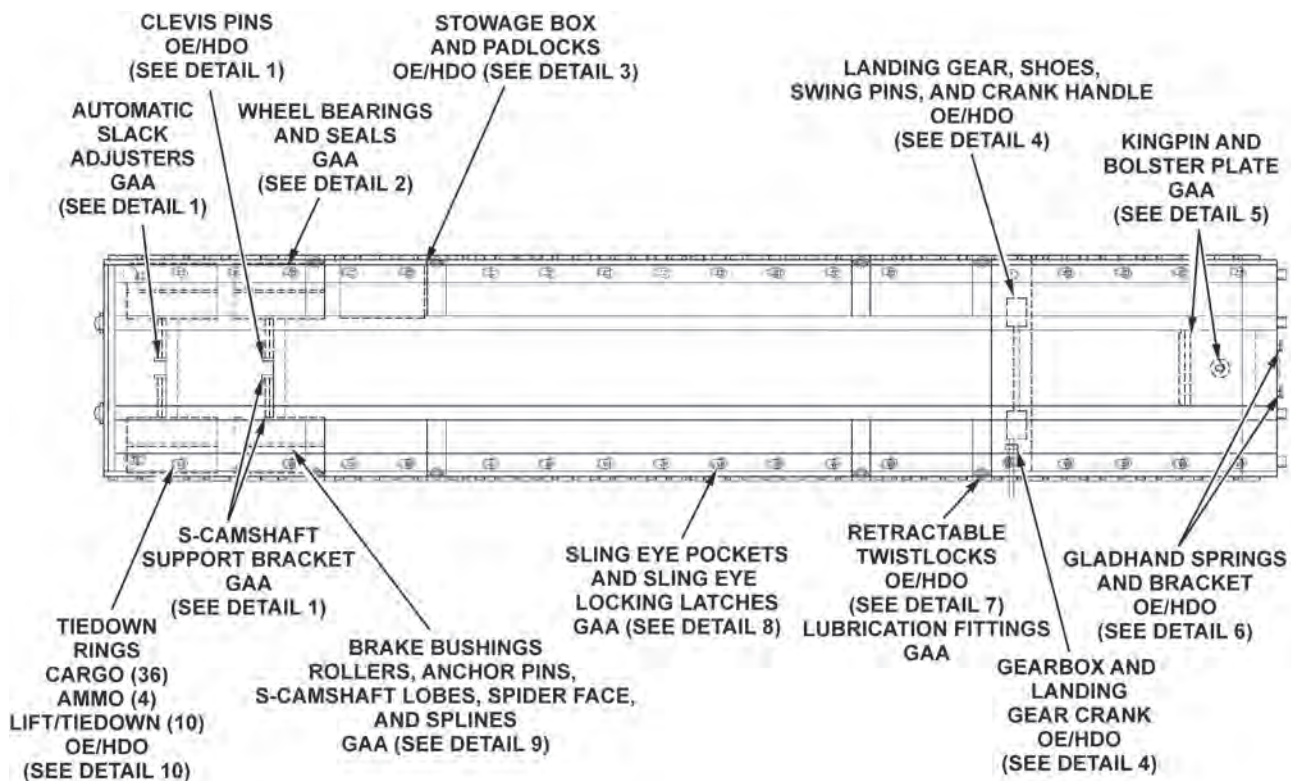


Figure 1. Lubrication Diagram.

LUBRICATION CHART AND DIAGRAMS - Continued

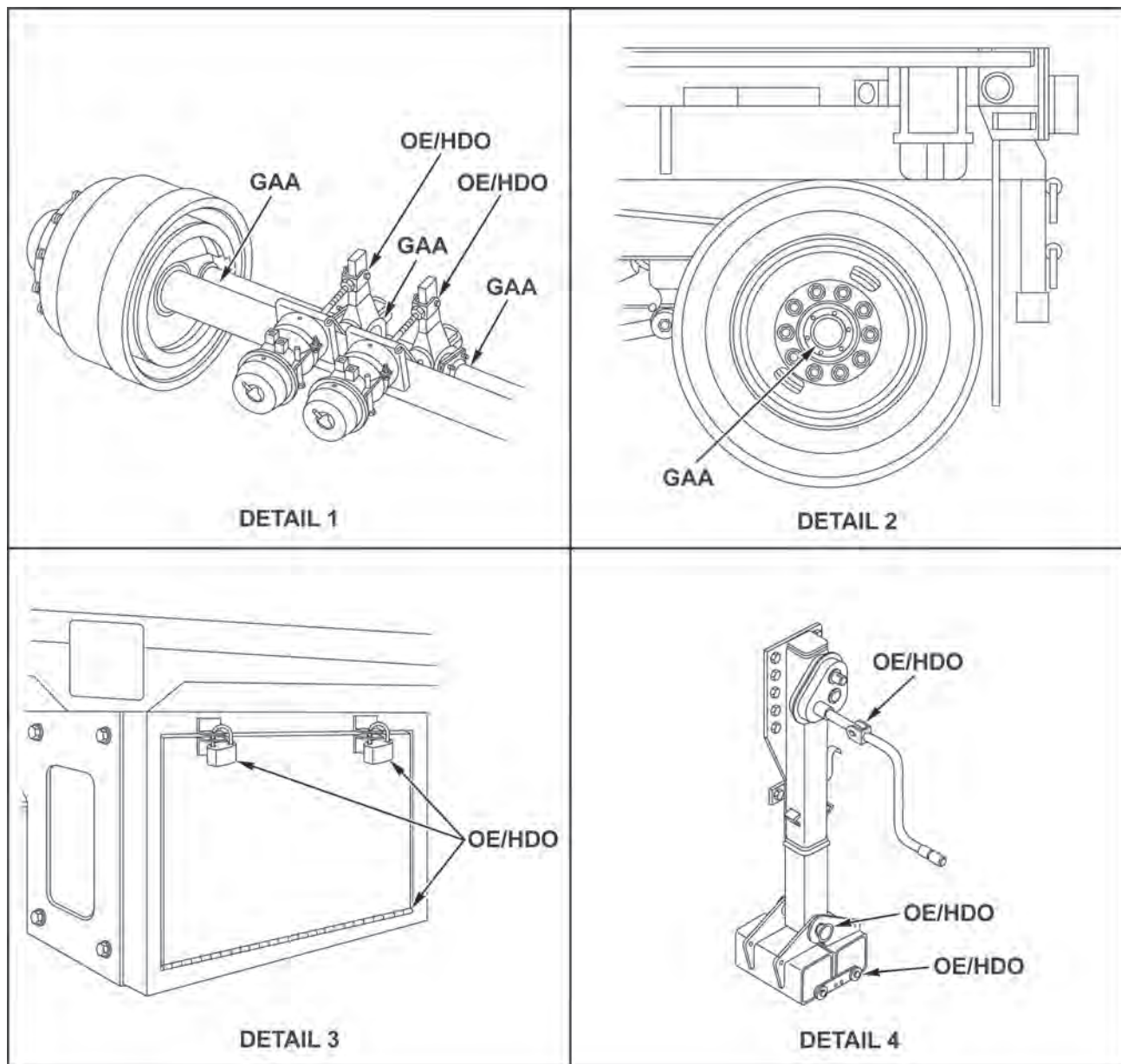


Figure 2. Lubrication Points, Details 1 Through 4.

LUBRICATION CHART AND DIAGRAMS - Continued

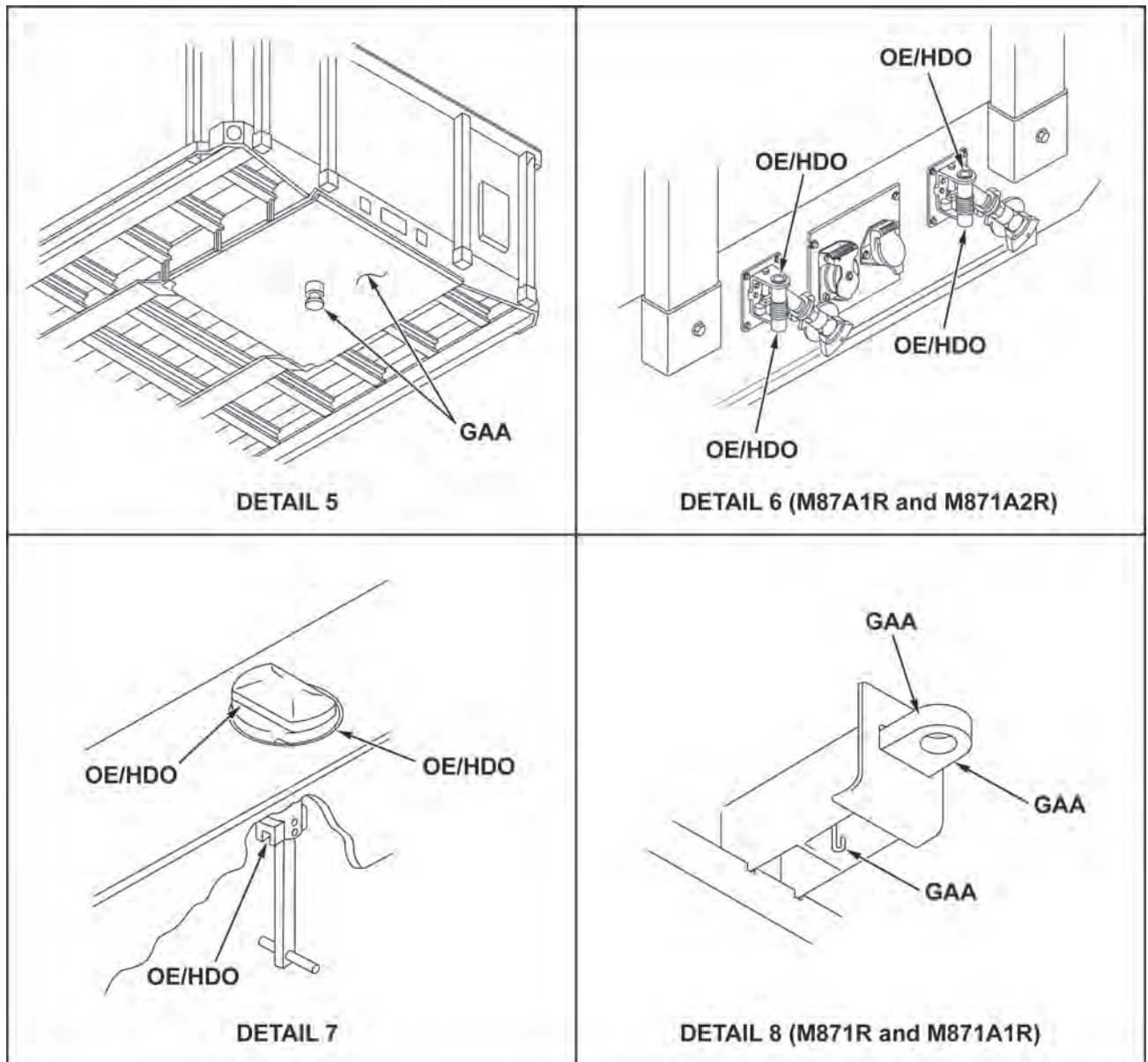


Figure 3. Lubrication Points, Details 5 Through 8.

LUBRICATION CHART AND DIAGRAMS - Continued

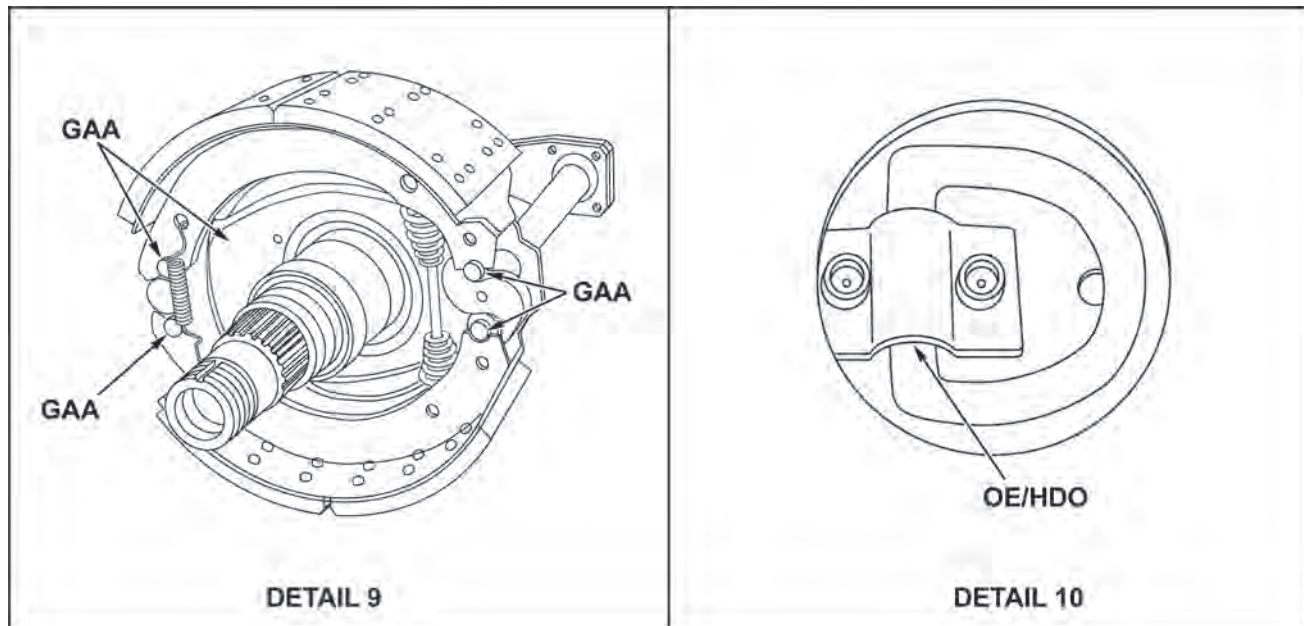


Figure 4. Lubrication Points, Details 9 and 10.

LUBRICANTS

Table 2 lists lubricants to be used in all temperature ranges.

Table 2. Lubricants Key.

LUBRICANTS	EXPECTED TEMPERATURES*		
	ABOVE +15 °F (ABOVE -9 °C)	-15 °F to +40 °F (-26 °C to +4 °C)	-65 °F to +40 °F (-54 °C to +4 °C)
OE/HDO (MIL-PRF-2104) Lubricating Oil, Internal Combustion Engine, Tactical Service	OE/HDO-30	OE/HDO-10	
OEA (MIL-PRF-46167) Lubricating Oil, Internal Combustion Engine, Arctic			OEA
GAA (MIL-PRF-10924) Grease, Automotive and Artillery	All temperatures		
*For arctic operation, refer to FM 9-207.			

COLD OPERATION

For operation of equipment in extended cold temperatures below -15°F (-26°C), remove lubricants prescribed in Table 2 for temperatures above -15°F (-26°C). Relubricate with lubricants specified in Table 2 for temperatures below -15°F (-26°C). If OEA lubricant is required to meet the temperature changes prescribed in Table 2, OEA lubricant is to be used in place of OE/HDO lubricant for all temperature ranges where OE/HDO lubricant is specified in Table 2.

S-CAMSHAFT (SPECIFIC)

1. When wheels and hubs are removed, place light film of lubricant on cam roller follower shafts, journals, and top and bottom surfaces of S-camshaft. Wipe off excess lubricant.

WARNING



DO NOT use grease with antiseize compound, more than 3-percent molysulfide content, or "white" grease in the automatic slack adjusters. These lubricants will adversely affect the friction clutch so it will not hold the adjustment, resulting in premature failure. Failure to comply may result in personnel injury or equipment damage. Seek medical attention in event of injury.

CAUTION

DO NOT overfill wheel end cavity with lubricant. DO NOT exceed grease level indicated. Also, ensure that excess grease is wiped away; it can contaminate brake linings and cause poor brake performance. Failure to comply may result in equipment damage.

2. Observe above warning and caution when lubricating automatic slack adjusters.

BEARINGS/HUBS

1. Pack bearing cones with grease by forcing grease, from large ends of cones, into cavities between rollers and cage. Use of pressure packer is recommended; otherwise, pack bearings by hand.

WARNING



Accidental or intentional introduction of liquid or non-liquid contaminants into the environment is a violation of state, federal, and military regulations. Refer to local environmental office or informational office for information concerning storage, use, and disposal of these liquids/non-liquids. Failure to comply may cause damage to environment and health of personnel. Seek medical attention in the event of an injury.

2. Apply light coat of grease to spindle-bearing journals and wipe off excess.
3. Fill hub cavity with grease to outer cap's smallest diameter.
4. At top of spindle and as far back as possible, pump additional grease until it appears that grease will run out. Install outer bearing cone quickly.
5. Hub cavity will be approximately 1/3 full of grease (from 4 to 8 o'clock position). This will involve installation of approximately 1.5 lb (0.7 kg) of grease.

BEARINGS/HUBS - Continued**CAUTION**

Brush a thin layer of Grease, Automotive and Artillery (GAA) on the inside of the hub cap. DO NOT cover vent with grease. DO NOT pack the hub cap with grease. DO NOT coat the cap mounting flange with grease. Coating the cap vent will result in seepage of lubricant and may clog the vent. Failure to comply may result in equipment damage.

6. Install wheel-retention hardware. If caps are not to be installed immediately, place dab of grease across face of locknut to show that hub cavity has been greased.
7. When brake shoes are replaced, apply even coat of lubricant between contact face of anchor pin bushing, brake shoe area, and spider faces. Coat anchor pin completely. Wipe off all excess grease.

SUSPENSION

Suspension does not require lubrication, but new replacement suspension hardware (nuts and threads) should be oiled before assembly, and a Wet torque should be applied. In-service torque values should have Dry torque values applied.

GENERAL SEMITRAILER LUBRICATION REQUIREMENTS**CAUTION**

High-pressure or steam wash is not authorized for the semitrailer. Failure to comply may result in equipment damage.

1. Oil requirements for semitrailer consist of only two types of lubricant, OEA and OE/HDO, for oil can points. Variants of lubricating oil are authorized only because of temperature variations.
2. Grease requirements for semitrailer consist of only GAA. Current GAA stocks are 100-percent synthetic and allow for extended service intervals as long as seals and gaskets are not leaking grease.
3. All fittings and lubrication points should be wiped clean before being lubed.
4. If padlock is used, ensure it is lubricated and operational.
5. Reference TM 43-0139 for semitrailer painting and TB 43-0209 for stencil identification marking.

FORDING OPERATIONS

1. Use common sense. If mission/situation does not allow for after-fording inspection, inspect semitrailer when mission allows.
2. Snub brakes three or four times to dry them out after fording.
3. If hubs were hot before fording, water may have been sucked in through hub cap. If hubs are cold or warm to touch, they should be all right.
4. If hubs and seals showed any signs of leakage before fording, they may be contaminated by water after fording semitrailer.
5. When mission allows, carefully remove hub caps to inspect for water contamination. If gasket is damaged, it must be replaced.
6. Use low-pressure fresh water to flush out all salt contamination, including road salt, from semitrailer to prevent corrosion.
7. Notify Field Maintenance if repairs are required.

END OF WORK PACKAGE

**FIELD MAINTENANCE
ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION**

INTRODUCTION**Scope**

This Work Package (WP) includes complete instructions for making items authorized to be manufactured or fabricated at the field level.

How to Use the Index of Manufactured Items

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the information which covers fabrication criteria.

Explanation of the Illustrations of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Table 1. Manufactured Items Materials.

ITEM NO.	PART NUMBER/ (CAGEC)	DESCRIPTION	DRAWING NUMBER	WP NO.
1	98100-AR (13548)	12 in. Red/White Reflective Tape	Figure 2	WP 0087
2	98101-AR (13548)	White Reflective Tape	Figure 2	WP 0087
3	98107-AR (13548)	Red/White Reflective Tape	Figure 2	WP 0087
4	PFT-6B-BLU-AR (61424)	3/8 in. Blue Tubing	Figure 1	WP 0087
5	PFT-6B-RED-AR (61424)	3/8 in. Red Hose	Figure 1	WP 0087

END OF WORK PACKAGE

FIELD MAINTENANCE
ILLUSTRATED LIST OF MANUFACTURED ITEMS MANUFACTURING PROCEDURES

INITIAL SETUP:

Not Applicable

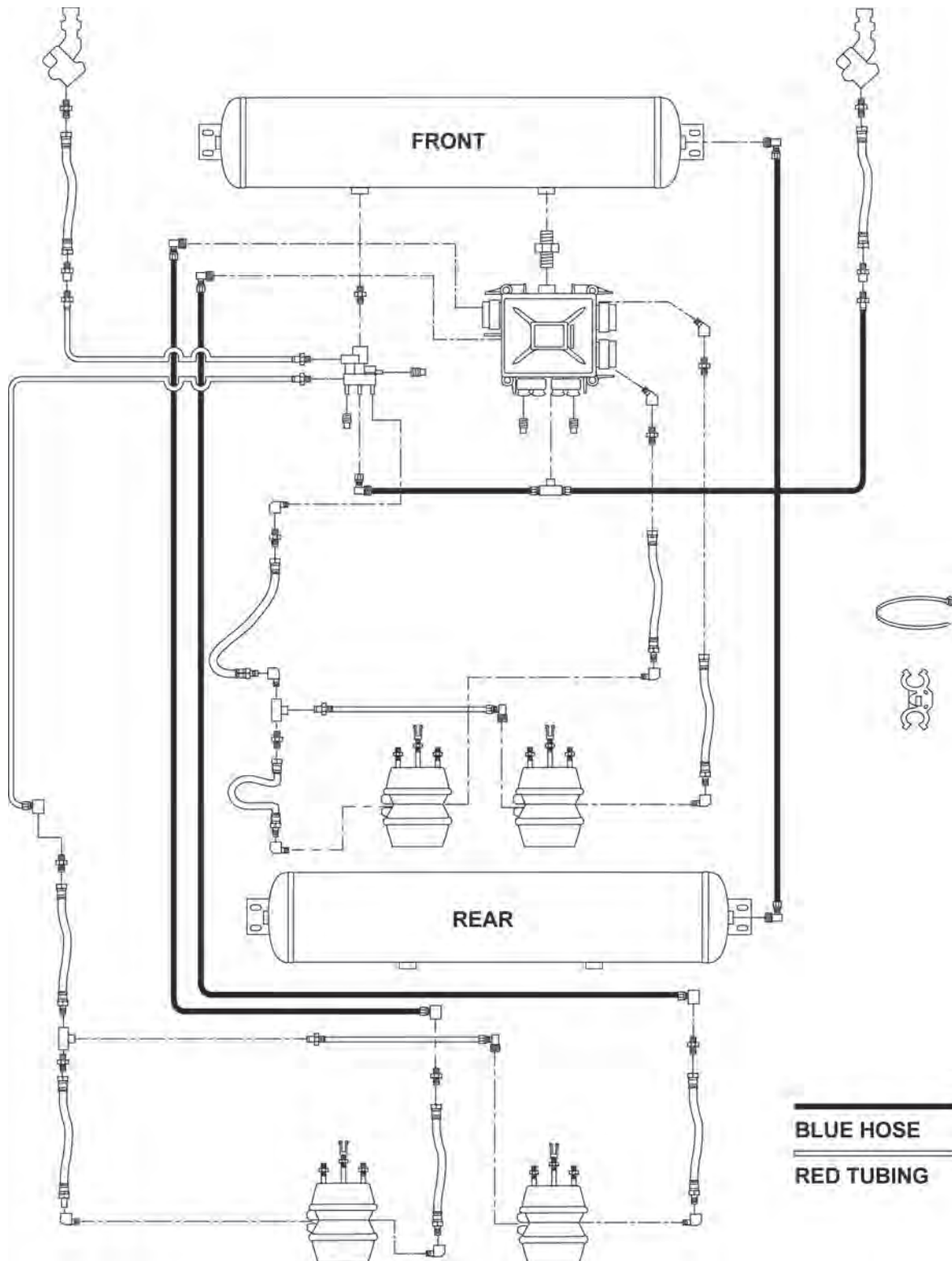
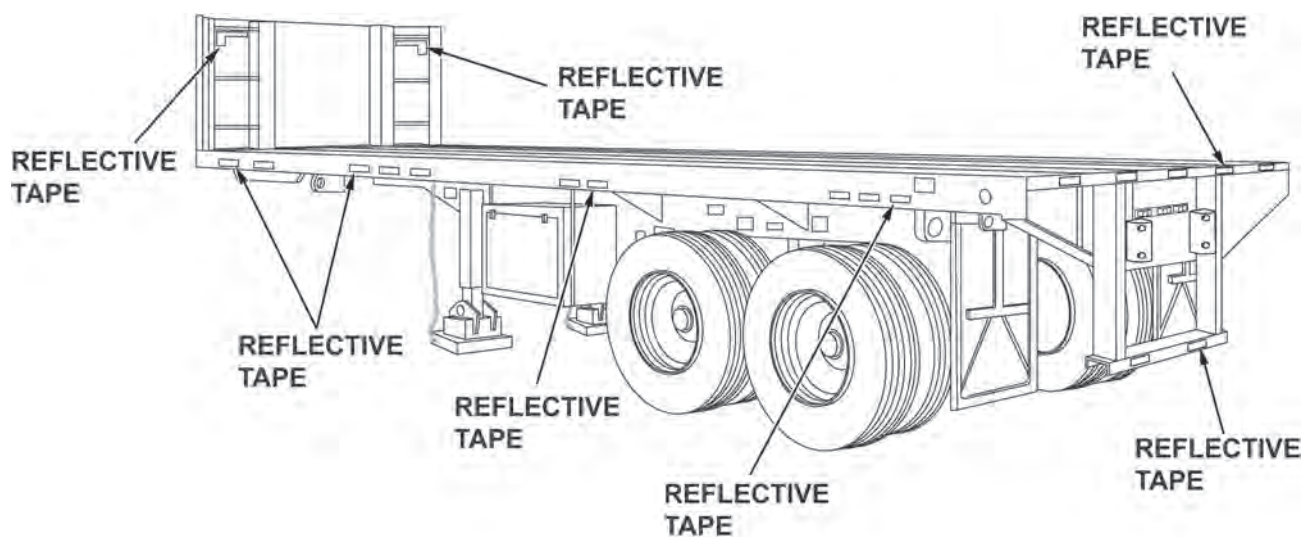


Figure 1. Air Line Hose and Tubing.

Table 1. Air Line Hose and Tubing.

ITEM	DESCRIPTION	DIMENSIONS IN. (CM)	MATERIALS – NATIONAL STOCK NUMBER (NSN) OR FEDERAL SUPPLY CODE FOR MAINTENANCE (FSCM), (CAGEC), AND PART NUMBER
Nonmetallic Hose, Blue	Air Line Hose	0.375 (0.95), Cut to Fit	(61424) PFT-6B-BLU-AR
Nonmetallic Tubing, Red	Air Line Tubing	0.375 (0.95), Cut to Fit	(61424) PFT-6B-RED-AR

**Figure 2. Reflective Tape.****Table 2. Reflective Tape.**

ITEM	DESCRIPTION	DIMENSIONS IN. (CM)	MATERIALS – NATIONAL STOCK NUMBER (NSN) OR FEDERAL SUPPLY CODE FOR MAINTENANCE (FSCM), (CAGEC), AND PART NUMBER
Reflective Tape	White	12 (30.48)	(13548) 98100-AR
Reflective Tape	Red/White	Cut to Fit	(13548) 98101-AR
Reflective Tape	Red/White	Cut to Fit	(13548) 98107-AR

END OF WORK PACKAGE

FIELD MAINTENANCE TORQUE LIMITS

SCOPE

This Work Package (WP) lists standard torque values and provides general information for applying torque. Special torque values and tightening sequences are indicated in the maintenance procedures for applicable components.

TORQUE VALUES

General

1. Always use torque values listed in Tables 2 and 3 when a maintenance procedure does not give a specific torque value.
 - a. Table 2 provides torque limits for SAE standard fasteners.
 - b. Table 3 provides torque limits for metric fasteners.
2. Unless otherwise indicated, standard torque tolerance shall be plus or minus 10 percent.

CAUTION

If replacement capscrews are of higher grade than originally supplied, use torque specifications for the original. Failure to comply may result in damage to equipment due to overtorquing.

3. Torque values listed are based on clean, dry threads. Reduce torque by 10 percent when engine oil is used as a lubricant. Reduce torque by 20 percent if new plated capscrews are used.

Tightening Metal Fasteners

When torquing a fastener, select a wrench with a range that fits the required torque value. A torque wrench is most accurate at 25 to 75 percent of its stated range. A wrench with a stated range of 0 to 100 lb-ft (0 to 136 N•m) will be most accurate at 25 to 75 lb-ft (34 to 102 N•m). The accuracy of readings will decrease as you approach 0 lb-ft or 100 lb-ft (136 N•m). Ranges in Table 1 are based on this principle.

Table 1. Metal Fasteners.

STATED RANGE		MOST EFFECTIVE RANGE	
0 to 200 lb-in	(0 to 23 N•m)	50 to 150 lb-in	(6 to 17 N•m)
0 to 600 lb-ft	(0 to 813 N•m)	50 to 150 lb-ft	(68 to 610 N•m)
0 to 170 lb-ft	(0 to 230 N•m)	44 to 131 lb-ft	(60 to 178 N•m)
15 to 75 lb-ft	(20 to 102 N•m)	30 to 60 lb-ft	(41 to 81 N•m)

TORQUE VALUES - Continued

Torque Conversion Formulas

When an extension such as a crowfoot or other adapter is added to a torque wrench, the extension changes the distance (radius). A mathematical formula is now used to determine the correct torque readings on the torque wrench to compensate for the added length.

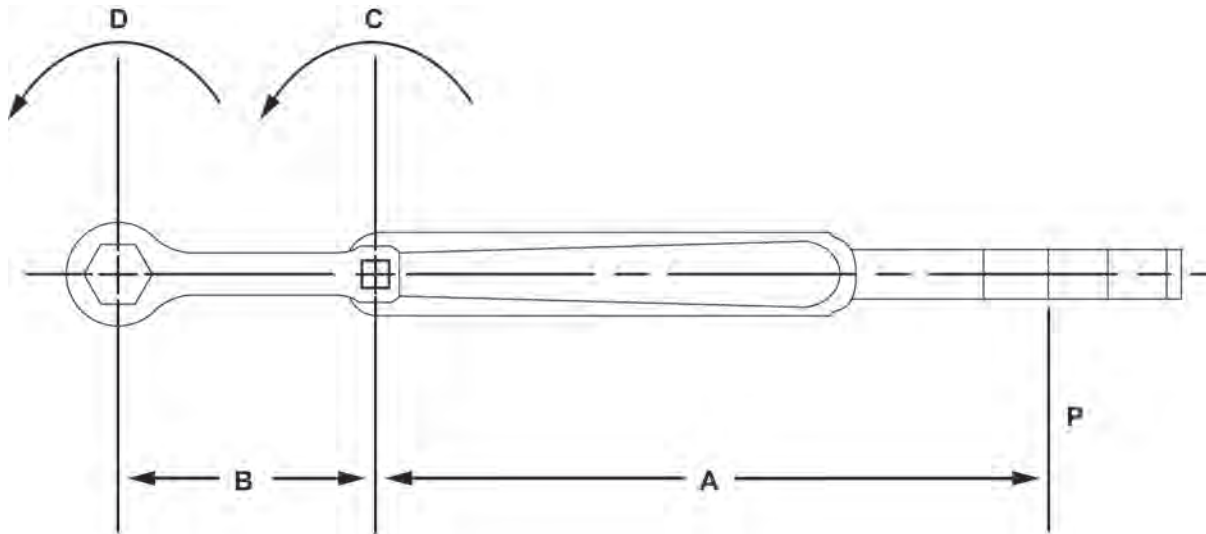


Figure 1. Torque Wrench Adapter Setups.

When an adapter or extension is used on a torque wrench, it increases the torque range of the wrench. The formulas for computing torque when using an adapter or extension are explained below.

A = (Length) Distance from center of torque wrench square drive to center of the puller's hand grip

B = Distance from center of torque wrench square drive to center of drive at end of extension

C = (Torque) Torque wrench setting

D = Torque desired at drive on end of extension

P = (Force) Pull applied

To determine torque wrench setting: **$C = (D \cdot A) / (A + B)$**

NOTE

After computing "**C**" and setting wrench to computation, measure and mark "**A**" where pull is applied.

It is recommended that the axis of the extension always be used in line with axis of the torque wrench as shown above.

TORQUE VALUES - Continued

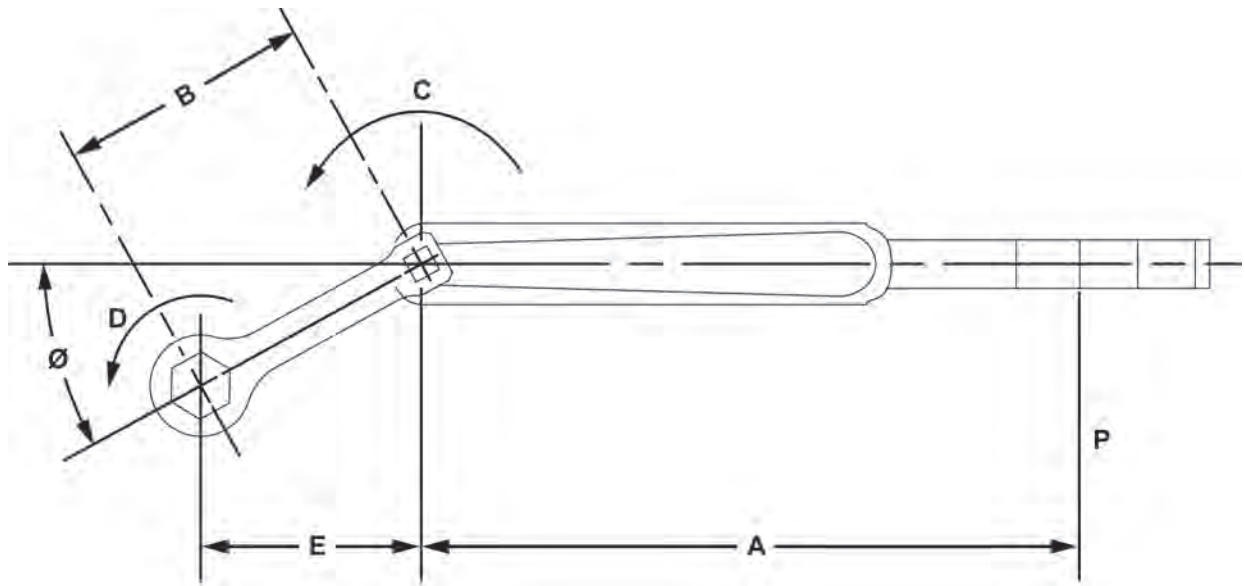


Figure 2. Torque Wrench Formulas.

Should it be necessary, due to obstructions, to have an angle between the two axes, then the above formula is modified as follows. Due to increasing rounding errors, keep the angle as small as possible.

A, B, C, D, and P are the same as above.

E = Effective moment arm of the extension

Ø = Angle between extension axis and torque wrench axis

$$E = (B) (\cos \varnothing)$$

Therefore:

$$C = (D \cdot A) / (A + (B \cdot \cos \varnothing))$$

When $\varnothing = 0$, $\cos \varnothing = 1$, then equation is reduced to $C = (D \cdot A) / (A + B)$

When $\varnothing = 90$ degrees, $\cos \varnothing = 0$, then $C = D$ (regardless of the length B)

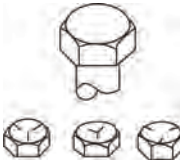


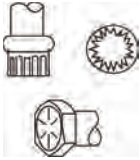
TORQUE VALUES - Continued

Installation and Torquing

1. **Matching Nuts.** Matching nuts require a minimum height equal to the basic diameter of the bolt. The same is true of tapped holes. In tapped softer materials, the depth of the tapped hole should be 1-1/2 times the basic diameter of the bolt.
2. **Threaded Protrusion.** In all installations, bolts, studs, and screws must extend through the nut at least a length equivalent to two complete threads. This applies to both locknuts and plain nuts.
3. **Torquing Locknuts.** To obtain the correct recommended torque value on locknuts, the nut must be tightened until it is one turn from the beginning of seating. At this point, if the torque is less than 1/3 of the recommended torque, it should be disregarded and the nut tightened to the recommended torque value. If the torque is 1/3 or more of the recommended torque, it should be added to the recommended torque. Example: the recommended torque is 50 to 70 lb-in (6 to 8 N•m). The torque at one turn from seating is 30 lb-in (3 N•m). The correct torque wrench reading would be 80 to 100 lb-in (9 to 11 N•m).
4. **R retorquing Fasteners.** Procedures intended for installing metal fasteners can cause incorrect readings when used to check or retorquing already installed fasteners during maintenance. Before checking or retorquing an already installed threaded fastener, first mark the fastener and its companion components so the marks are in line. Second, back it off 1/4 turn to loosen it. Torque it to the specification with an even steady pull on the torque wrench. The marks should be in line; if not, the marks will indicate the fastener was undertorqued or overtorqued.
5. **Standard Torque Charts.** Standard torque charts have been established for Dry and Wet torque conditions. Surface variations such as thread roughness, scale paint, lubrication (oil, grease, etc.), hardening, and plating may alter these values considerably. Tables 2 and 3 are standard torque charts.
6. **Grade.** To find the grade of the screw that is to be installed, match the markings on the head to the correct picture of Capscrew Head Markings in Tables 2 and 3. Manufacturers' marks may vary.





TORQUE VALUES - Continued

Table 2. Torque Limits – SAE Standard Fasteners.

QUALITY OF MATERIAL	INDETERMINATE	MINIMUM COMMERCIAL	MEDIUM	BEST COMMERCIAL
SAE Grade Number	1 or 2	5	6 or 7	8
Capscrew Head Markings				
Manufacturers' marks may vary				
These are all SAE Grade 5 (3 line)				
CAPSCREW BODY SIZE IN. – THREAD	TORQUE LB-FT (N•m)	TORQUE LB-FT (N•m)	TORQUE LB-FT (N•m)	TORQUE LB-FT (N•m)
1/4 20 28	5 (7) 6 (8)	8 (11) 10 (14)	10 (14)	12 (16) 14 (19)
5/16 18 24	11 (15) 13 (18)	17 (23) 19 (26)	19 (26)	24 (33) 27 (37)
3/8 16 24	18 (24) 20 (27)	31 (42) 35 (47)	34 (46)	44 (60) 49 (66)
7/16 14 20	28 (38) 30 (41)	49 (66) 55 (75)	55 (75)	70 (95) 78 (106)
1/2 13 20	39 (53) 41 (56)	75 (102) 85 (115)	85 (115)	105 (142) 120 (163)
9/16 12 18	51 (69) 55 (75)	110 (149) 120 (163)	120 (163)	155 (210) 170 (231)
5/8 11 18	83 (113) 95 (129)	150 (203) 170 (231)	167 (226)	210 (285) 240 (325)
3/4 10 16	105 (142) 115 (156)	270 (366) 295 (400)	280 (380)	375 (508) 420 (569)
7/8 9 14	160 (217) 175 (237)	395 (536) 435 (590)	440 (597)	605 (820) 675 (915)
1 8 14	235 (319) 250 (339)	590 (800) 660 (895)	660 (895)	910 (1,234) 990 (1,342)

TORQUE VALUES - Continued

Table 3. Torque Limits – Metric Fasteners.

THREAD DIAMETER-PITCH	 CLASS 8.8 BOLT	 CLASS 8 NUT	 CLASS 10.9 BOLT	 CLASS 10 NUT
	TORQUE LB-FT (N•m)		TORQUE LB-FT (N•m)	
M6	5	(7)	7	(9)
M8	12	(16)	17	(23)
M8 × 1	13	(18)	18	(24)
M10	24	(33)	34	(46)
M10 × 1.25	27	(37)	38	(52)
M12	42	(57)	60	(81)
M12 × 1.5	43	(58)	62	(84)
M14	66	(89)	95	(129)
M14 × 1.5	72	(98)	103	(140)
M16	103	(140)	148	(201)
M16 × 1.5	110	(149)	157	(213)
M18	147	(199)	203	(275)
M18 × 1.5	165	(224)	229	(310)
M20	208	(282)	288	(390)
M20 × 1.5	213	(313)	320	(434)
M22	283	(384)	392	(531)
M22 × 1.5	315	(427)	431	(584)
M24	360	(488)	498	(675)
M24 × 2	392	(531)	542	(735)
M27	527	(715)	729	(988)
M27 × 2	569	(771)	788	(1,068)
M30	715	(969)	990	(1,342)
M30 × 2	792	(1,074)	1,096	(1,486)

END OF TASK

END OF WORK PACKAGE

CHAPTER 9

PARTS INFORMATION

WORK PACKAGE INDEX

Title	WP Sequence No.
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION.....	WP 0089
BLACKOUT LIGHT.....	WP 0090
CLEARANCE LIGHTS.....	WP 0091
LED TAILLIGHT.....	WP 0092
CONVERTER ASSEMBLY UNIT.....	WP 0093
CHASSIS WIRING HARNESS.....	WP 0094
AXLE ASSEMBLY.....	WP 0095
BRAKE CAMSHAFT COMPONENTS.....	WP 0096
SERVICE BRAKE COMPONENTS.....	WP 0097
SLACK ADJUSTER.....	WP 0098
ECU/VALVE ASSEMBLY.....	WP 0099
ABS BRAKE POWER HARNESS AND SENSOR.....	WP 0100
AIR LINES AND FITTINGS.....	WP 0101
AIR BRAKE CHAMBER.....	WP 0102
AIR RESERVOIRS.....	WP 0103
AIR BRAKE CHAMBER CONTROL VALVE.....	WP 0104
GLADHANDS.....	WP 0105
HUB AND DRUM.....	WP 0106
WHEEL ASSEMBLY.....	WP 0107
RETRACTABLE TWISTLOCK.....	WP 0108
LIFTING, TIEDOWN RING, LADDER, COVER PLATE, AND RELATED PARTS.....	WP 0109
SPARE TIRE CARRIER.....	WP 0110
KINGPIN.....	WP 0111
LANDING GEAR.....	WP 0112
GROUND BOARD ASSEMBLY.....	WP 0113
SUSPENSION.....	WP 0114
FRONT, SIDE, AND REAR STAKES.....	WP 0115
BULKHEAD AND STOWAGE RACK ASSEMBLY.....	WP 0116
SIDE AND REAR BOARDS.....	WP 0117
MUD FLAPS.....	WP 0118
FLOOR DECKING.....	WP 0119
STOWAGE BOX.....	WP 0120
MANIFEST BOX.....	WP 0121
RUBBER DOCK BUMPERS.....	WP 0122
REFLECTORS.....	WP 0123
REFLECTIVE TAPE.....	WP 0124
DATA PLATES.....	WP 0125
ABS WARNING LIGHT.....	WP 0126
HUB MILEAGE METER.....	WP 0127
REPAIR PARTS KITS.....	WP 0128
BULK.....	WP 0129
NATIONAL STOCK NUMBER (NSN) INDEX.....	WP 0130
PART NUMBER (P/N) INDEX.....	WP 0131

FIELD MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts; special tools; special Test, Measurement, and Diagnostic Equipment (TMDE); and other special support equipment required for performance of Field Maintenance of the M871R Series Semitrailer. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance, and Recoverability (SMR) codes.

GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages:

1. **Repair Parts List Work Packages.** Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work package. Repair parts kits are listed separately in their own functional group and work packages. Repair for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
2. **Special Tools List Work Packages.** Work Packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) Column). Tools that are components of common tool sets and/or Class VII are not listed.
3. **Cross-Reference Indexes Work Packages.** There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package (WP 0130) and the Part Number (P/N) Index work package (WP 0131). The NSN Index work package refers you to the figure and item number. The P/N Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

ITEM NO (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout. This entry may be subdivided into four subentries, one for each service.

Table 1. SMR Code Explanation.

<u>Source Code</u> <u>XX</u>		<u>Maintenance Code</u> <u>XX</u>	<u>Recoverability Code</u> <u>X</u>
1st two positions: How to get an item.	3rd position: Who can install, replace, or use the item.	4th position: Who can do complete repair* on the item.	5th position: Who determines disposition action on unserviceable items.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

***Complete Repair:** Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

<u>Source Code</u>	<u>Application/Explanation</u>
PA	<p style="text-align: center;">NOTE</p> <p>Items coded PC are subject to deterioration.</p>
PB	
PC	
PD	
PE	
PF	
PG	
PH	
PR	
PZ	
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MF - Made at field MH - Made at below depot/sustainment level ML - Made at SRA MD - Made at depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the P/N in the DESCRIPTION AND USABLE ON CODE (UOC) Column and listed in the bulk material functional group of this RPSTL. If the item is authorized to you by the third position of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
AF - Assembled by field AH - Assembled by below depot/sustainment level AL - Assembled by SRA AD - Assembled by depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the third position of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
XA	Do not requisition an "XA" coded item. Order the next higher assembly. (Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the Commercial and Government Entity Code (CAGEC) and P/N.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.
XD	Item is not stocked. Order an "XD" coded item through local purchase or normal supply channels using the CAGEC and P/N given, if no NSN is available.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS
LIST WORK PACKAGES - Continued****NOTE**

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

<u>Maintenance Code</u>	<u>Application/Explanation</u>
C -	Crew maintenance can service, remove, replace, and use the item.
F -	Field maintenance can remove, replace, and use the item.
H -	Below Depot Sustainment maintenance can remove, replace, and use the item.
L -	Specialized Repair Activity (SRA) can remove, replace, and use the item.
K -	Contractor facility can remove, replace, and use the item.
Z -	Item is not authorized to be removed, replaced, or used at any maintenance level.
D -	Depot can remove, replace, and use the item.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

NOTE

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

<u>Maintenance Code</u>	<u>Application/Explanation</u>
F -	Field is the lowest level that can do complete repair of the item.
H -	Below Depot Sustainment is the lowest level that can do complete repair of the item.
L -	SRA is the lowest level that can do complete repair of the item.
D -	Depot is the lowest level that can do complete repair of the item.
K -	Complete repair is done at contractor facility.
Z -	Nonreparable. No repair is authorized.
B -	No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is shown in the fifth position of the SMR code as follows:

<u>Recoverability Code</u>	<u>Application/Explanation</u>
Z -	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
F -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the field level.
H -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the below depot sustainment level.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L -	Reparable item. Condemnation and disposal not authorized below SRA.
A -	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
K -	Reparable item. Condemnation and disposal to be performed at contractor facility.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The CAGEC is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different P/N from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)).

This column includes the following information:

1. The federal item name and, when required, a minimum description to identify the item.
2. P/Ns of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from Electromagnetic Pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in Column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). The QTY (quantity per figure) Column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. **NATIONAL STOCK NUMBER (NSN) INDEX Work Package.** NSNs in this index are listed in National Item Identification Number (NIIN) sequence.

STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number. For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. Column. This item is also identified by the NSN listed on the same line.

**EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS -
Continued**

2. **PART NUMBER (P/N) INDEX Work Package.** P/Ns in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combination which places the first letter or digit of each group in order "A" through "Z," followed by the numbers "0" through "9" and each following letter or digit in like order).

PART NUMBER Column. Indicates the P/N assigned to the item.

FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

ITEM Column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent FIG. Column.

SPECIAL INFORMATION

UOC. The UOC appears in the lower left corner of the DESCRIPTION Column heading. Usable on codes are shown as "UOC:..." in the DESCRIPTION Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

<u>Code</u>	<u>Used On</u>
SJB	M871R
SCB	M871A1R
SKB	M871A2R

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. P/Ns for bulk material are also referenced in the DESCRIPTION Column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in WP 0087.

Index Numbers. Items which have the word BULK in the FIG. Column will have an index number shown in the ITEM NO Column. This index number is a cross-reference between the National Stock Number (NSN) Index work package, the Part Number (P/N) Index work package, and the bulk material list in the repair parts list work package.

HOW TO LOCATE REPAIR PARTS

1. When NSNs or P/Ns Are Not Known.

First. Use the table of contents to determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second. Find the figure covering the functional group or subfunctional group to which the item belongs.

Third. Identify the item on the figure and note the number(s).

Fourth. Look in the repair parts list work packages for the figure and item numbers. The NSNs and P/Ns are on the same line as the associated item numbers.

2. When NSN Is Known.

First. If you have the NSN, look in the STOCK NUMBER column of the NSN Index work package. The NSN Index work package is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

3. When P/N Is Known.

First. If you have the P/N and not the NSN, look in the PART NUMBER Column of the Part Number (P/N) Index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

END OF WORK PACKAGE

FIELD MAINTENANCE
BLACKOUT LIGHT

1
2 AND 3

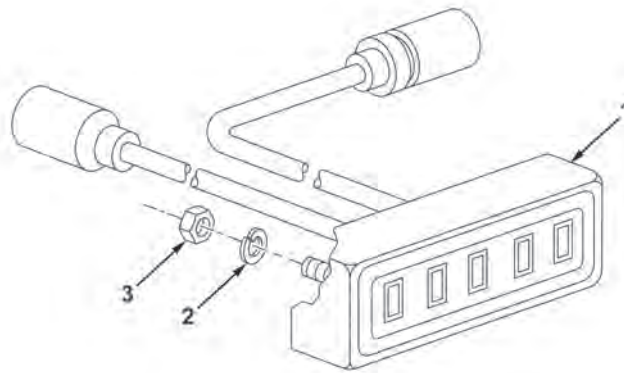


Figure 1. Blackout Light.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 0609 LIGHTS						
FIG. 1. BLACKOUT LIGHT.						
1	PFFZZ	6220-01-088-5915	5A910	12258212	LIGHT,BLACKOUT.....	2
2	PAFZZ	5310-00-045-3299	80205	MS35338-42	. WASHER,LOCK.....	2
3	PAFZZ	5310-00-934-9757	80205	MS35649-282	. NUT,PLAIN,HEXAGON.....	2

END OF FIGURE

FIELD MAINTENANCE
CLEARANCE LIGHTS

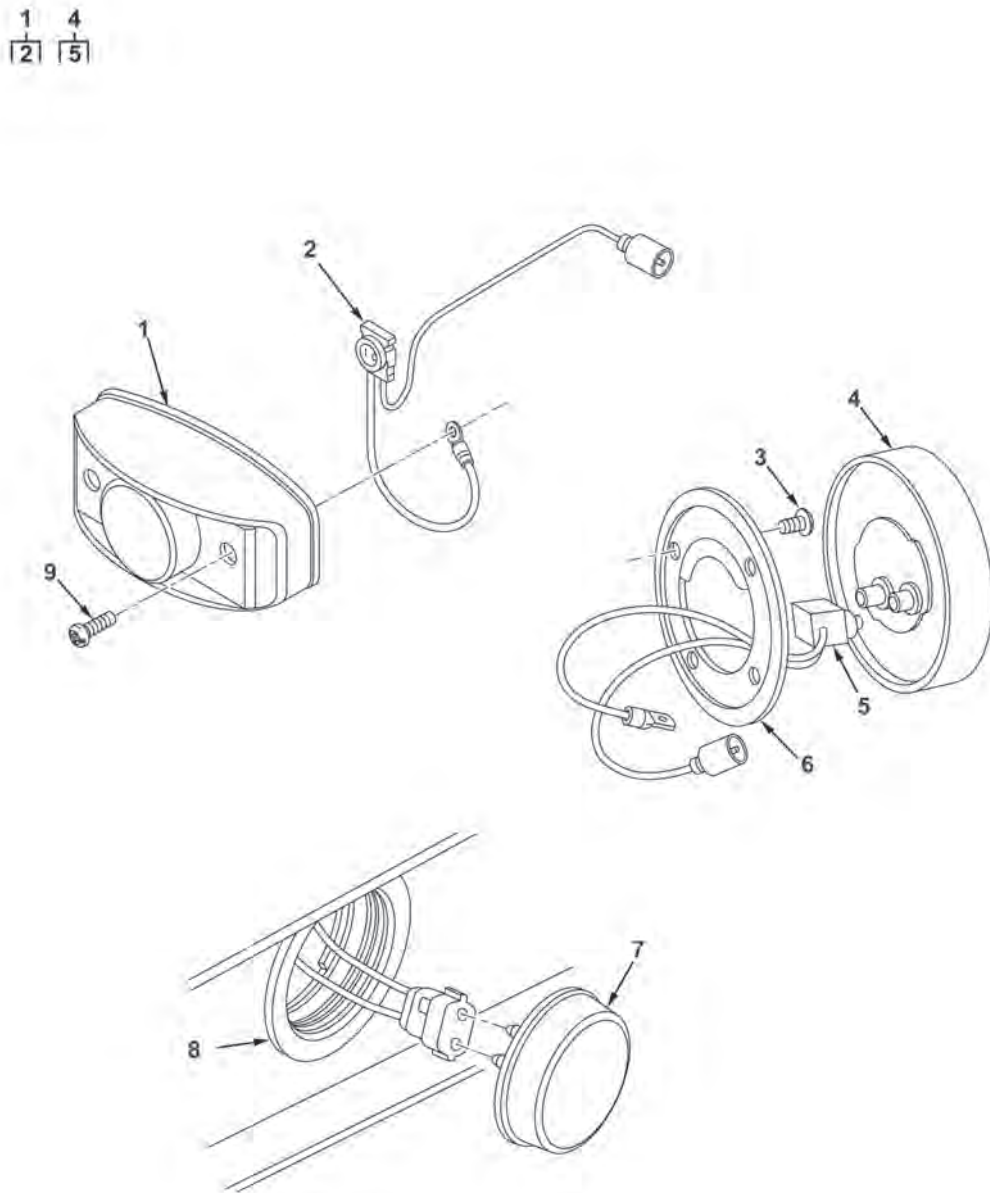


Figure 2. Clearance Lights.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 0609 LIGHTS						
FIG. 2. CLEARANCE LIGHTS.						
1	PFFZZ	6220-01-482-5574	13548	07407	LIGHT,MARKER,CLEARA AMBER MIDSHIP.....	2
1	PFFZZ	6220-01-482-6113	13548	07406	LIGHT,MARKER,CLEARA RED.....	3
2	PFFZZ	6150-01-459-1811	13548	94626	. LEAD ASSEMBLY,ELECT.....	1
3	PFFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING 0.25 X 0.70" UOC: SJB	8
4	PFFZZ	6220-01-482-5444	13548	30255R	LAMP UNIT,VEHICULAR RED REAR SIDES UOC: SCB,SKB	2
4	PFFZZ	6220-01-095-0010	13548	10202Y	LIGHT,MARKER,CLEAR AMBER FRONT SIDE UOC: SJB	2
5	PFFZZ	6150-01-459-1811	13548	94626	. LEAD ASSEMBLY,ELECT.....	1
6	PFFZZ	2590-01-556-2096	13548	30720	BRACKET,VEHICULAR C UOC: SJB	4
7	PFFZZ	6220-01-183-4557	13548	10205R	LAMP UNIT,VEHICULAR RED REAR SIDE UOC: SCB,SKB	2
7	PFFZZ	6220-01-482-5320	13548	30255Y	LAMP UNIT,VEHICULAR AMBER FRONT UOC: SJB	2
8	PFFZZ	5325-01-556-1398	3DGR3	50824018	GROMMET,NONMETALLIC M871R ONLY USES 2.....	4
9	PAFZZ	5305-01-499-3342	3DGR3	52100013	SCREW,TAPPING.....	20

END OF FIGURE

FIELD MAINTENANCE
LED TAILLIGHT

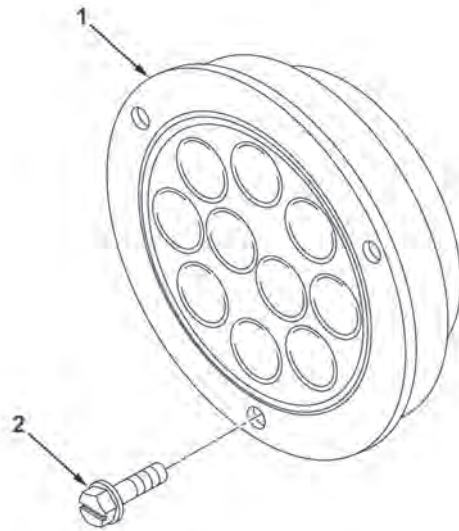


Figure 3. LED Taillight.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 0609 LIGHTS						
FIG. 3. LED TAILLIGHT.						
1	PFFZZ	6220-01-499-3350	3DGR3	50920012	LIGHT SET,STOP LIGH RED LED.....	4
2	PFFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING 0.25 X 0.70".....	12

END OF FIGURE

FIELD MAINTENANCE
CONVERTER ASSEMBLY UNIT

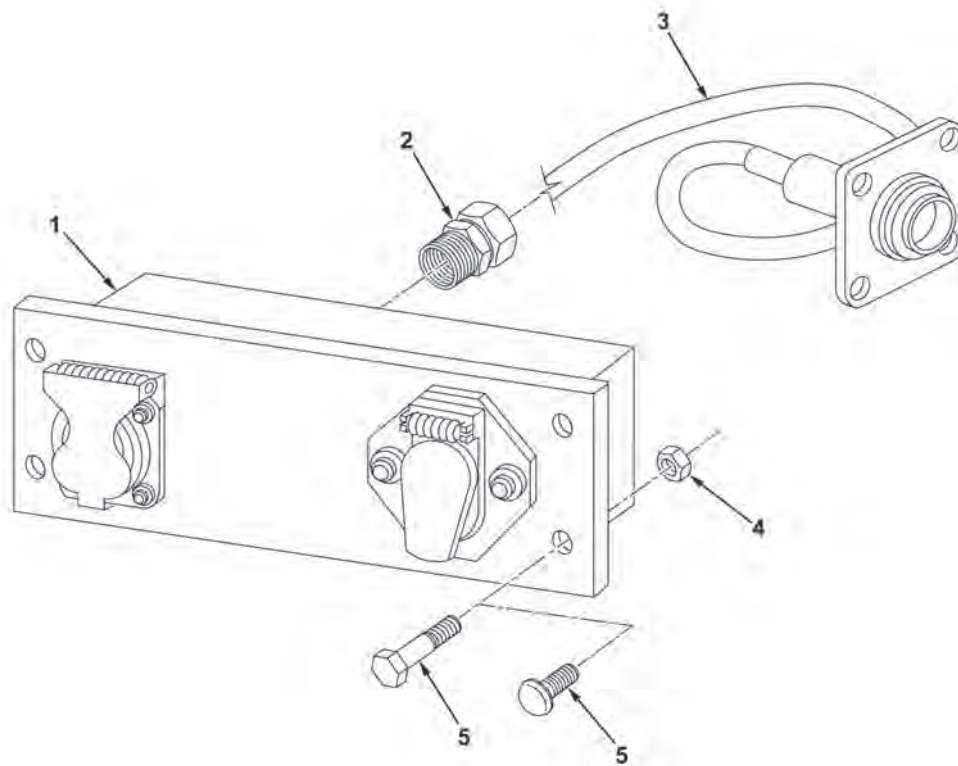


Figure 4. Converter Assembly Unit.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 0613 HULL OR CHASSIS WIRING HARNESS						
FIG. 4. CONVERTER ASSEMBLY UNIT.						
1	PFFZZ	6130-01-556-1480	60359	UTM-2412	POWER SUPPLY PART FOR CORE CREDIT.....	1
2	XCFZZ		60359	0D70-1898-00	BUSHING,CABLE,WATER.....	1
3	XCFZZ		60359	0L90-1874-00	PIGTAIL,WIRING HAR.....	1
4	PAFZZ	5310-00-814-0673	81349	M45913/3-5CG8C	NUT,SELF-LOCKING,HE 5/16-18.....	4
5	PAFZZ	5305-00-226-4831	05047	AES01C312A50AW9 A91	SCREW,CAP,HEXAGON H 5/16-18 X 1.50 UOC: SKB	4
5	PFFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING 0.25 X 0.70" UOC: SCB,SJB	4

END OF FIGURE

**FIELD MAINTENANCE
CHASSIS WIRING HARNESS**

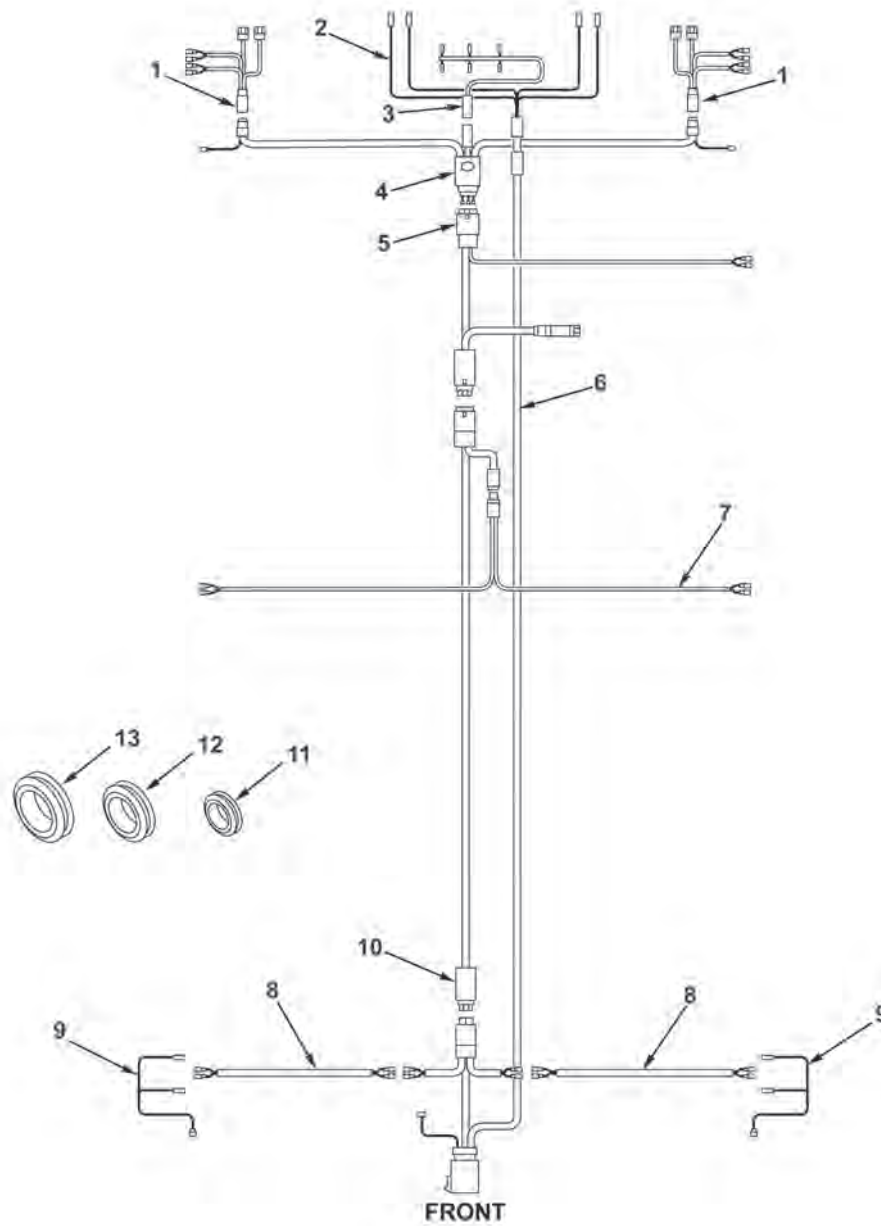


Figure 5. Chassis Wiring Harness.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 0613 HULL OR CHASSIS WIRING HARNESS						
FIG. 5. CHASSIS WIRING HARNESS.						
1	PFFZZ	6150-01-499-3332	64466	28161-028	WIRING HARNESS.....	2
2	PFFZZ	6150-01-499-3289	3DGR3	50851109	WIRING HARNESS BLACK-OUT.....	1
3	PFFZZ	6150-01-499-3311	64466	72203-012	WIRING HARNESS.....	1
4	PFFZZ	6150-01-499-3315	64466	25150-028	WIRING HARNESS REAR.....	1
5	PFFZZ	6150-01-499-3320	64466	17900-086	WIRING HARNESS ABS MAIN.....	1
6	PFFZZ	6150-01-499-3321	64466	70-7100-00	WIRING HARNESS BLACK-OUT.....	1
7	PFFZZ	6150-01-499-3323	64466	63400-227	WIRING HARNESS MIDTURN ABS.....	1
8	PFFZZ	6150-01-499-3327	64466	52302-036	WIRING HARNESS PL-10 MARKER.....	2
9	PFFZZ	6150-01-499-3328	64466	82100-008	WIRING HARNESS LEAD PL 10, M871R USES 3, M871A1R & M871A2R USE 2.....	3
10	PFFZZ	6150-01-499-3329	64466	18125-400	WIRING HARNESS MAIN.....	1
11	PFFZZ	5325-00-279-1248	96906	MS35489-103	GROMMET, NONMETALLIC CLEARANCE AND ABS LIGHT WIRING....	11
12	PFFZZ	5325-00-290-0074	96906	MS35489-109	GROMMET, NONMETALLIC.....	60
13	PFFZZ	5325-01-499-3362	3DGR3	50824060	GROMMET, NONMETALLIC.....	4

END OF FIGURE

FIELD MAINTENANCE
AXLE ASSEMBLY

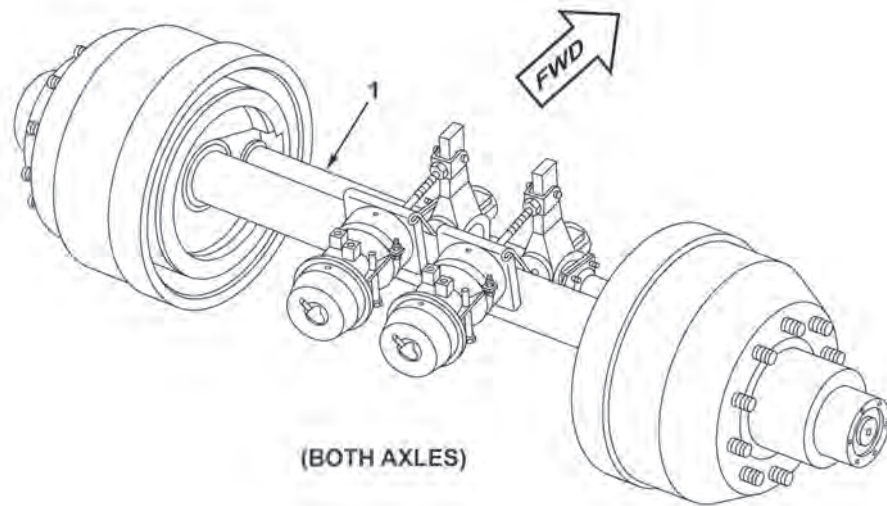


Figure 6. Axle Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
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GROUP 1100 REAR AXLE ASSEMBLY**FIG. 6. AXLE ASSEMBLY.**

1	PFFFF	2520-01-499-5403	3DGR3	50045217	AXLE ASSEMBLY,AUTOM SEE FIGURES 7, 8, 9, 13, AND 17 FOR DOWN PARTS.....	2
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END OF FIGURE

**FIELD MAINTENANCE
BRAKE CAMSHAFT COMPONENTS**

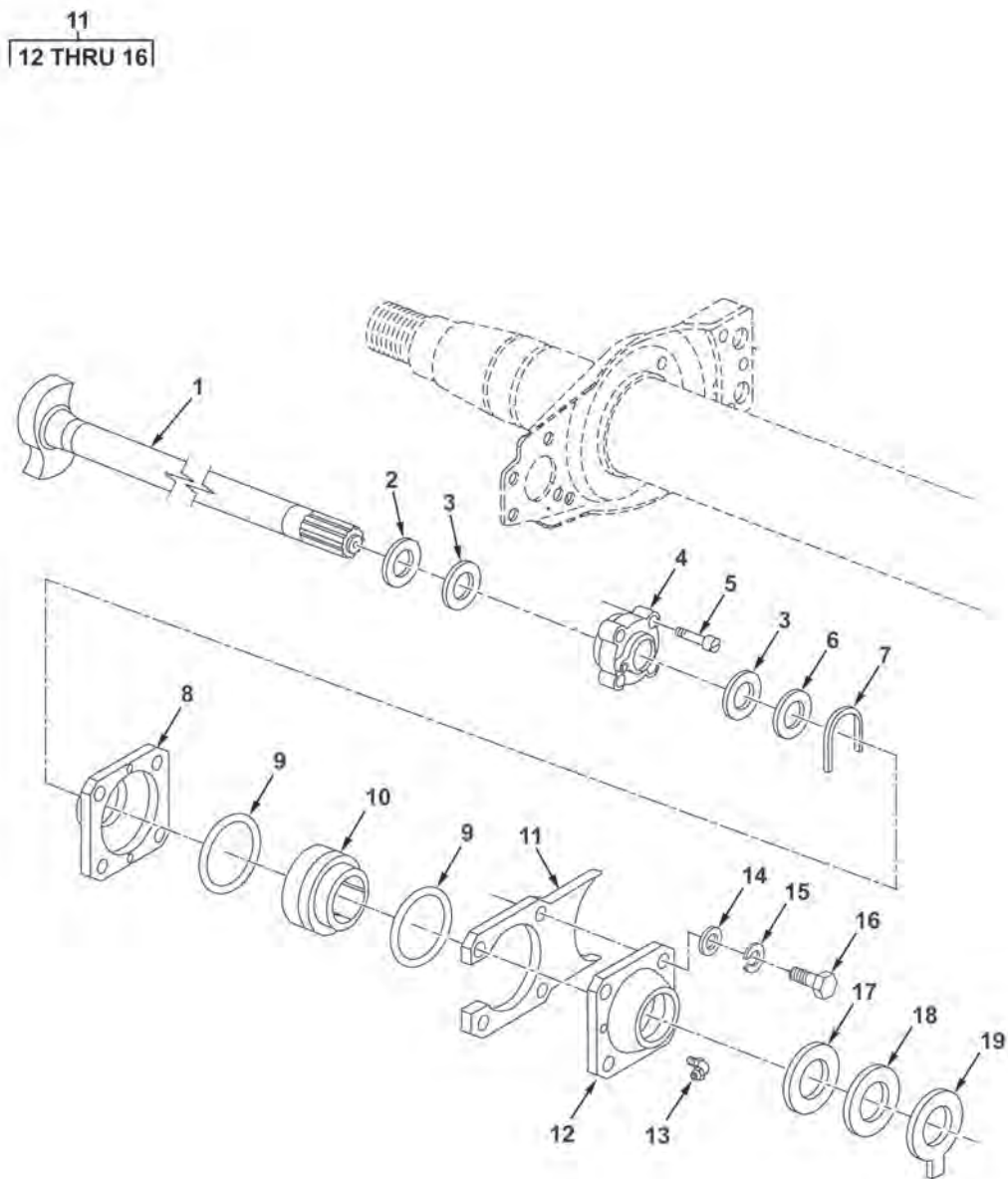
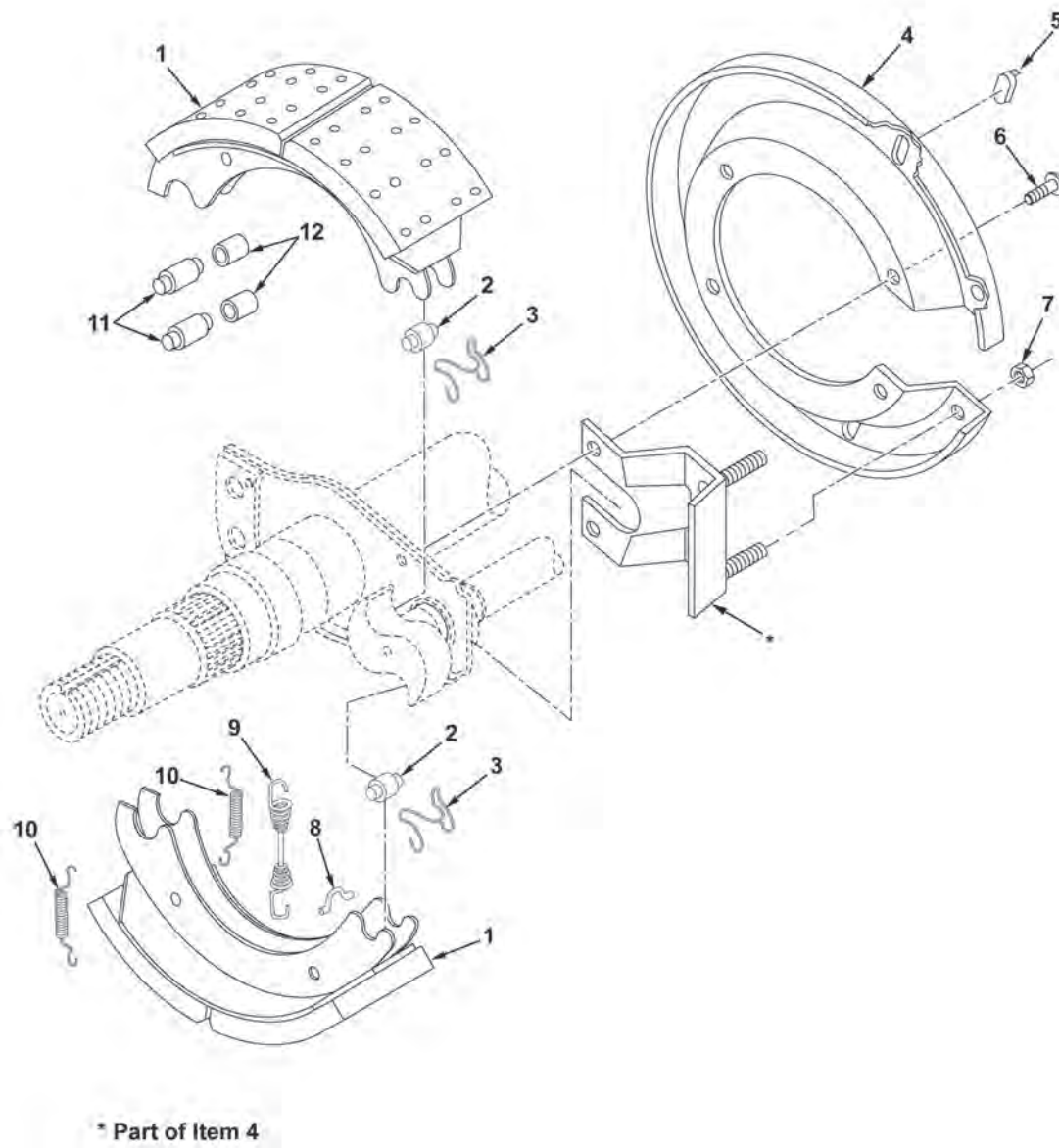


Figure 7. Brake Camshaft Components.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1202 SERVICE BRAKES						
FIG. 7. BRAKE CAMSHAFT COMPONENTS.						
1	PFFZZ	2530-01-499-3159	78500	2210-E-6869	CAMSHAFT,ACTUATING, LH, Q-PLUS.....	1
1	PFFZZ	2530-01-499-3135	78500	2210-D-6868	CAMSHAFT,ACTUATING, RH, Q-PLUS....	1
2	PAFZZ	5310-01-499-3382	78500	1229-R-4100	WASHER,RECESSED PART OF KIT P/N KIT8078.....	2
3	PFFZZ	5330-01-328-6090	78500	1205-Q-2123	GASKET PART OF KIT P/N KIT8078.....	4
4	PFFZZ	2530-01-359-8091	45152	2GL765	RETAINER,ARM BUSHIN PART OF KIT P/N KIT8078.....	2
5	PAFZZ	5305-01-359-1367	3D6E9	10-X-1421	SCREW,TAPPING PART OF KIT P/N KIT8078.....	8
6	PAFZZ	5310-01-499-3372	78500	1229-S-4101	WASHER,FLAT PART OF KIT P/ N KIT8078.....	2
7	PFFZZ	5325-01-499-3380	3D6E9	1229-T-4102	RING,RETAINING PART OF KIT P/N KIT8078.....	2
8	PFFZZ	3120-01-499-3388	78500	1225-R-1058	BUSHING,SLEEVE.....	2
9	PFFZZ	5331-00-205-3583	78500	1205X726	O-RING.....	4
10	PFFZZ	3120-01-552-7425	78500	A-3105-K-219	BUSHING,SLEEVE.....	2
11	PFFFF	2590-01-556-1271	78500	A-3299-T-5844	BRACKET,VEHICULAR C INCLUDES BRACKET AND BUSHING.....	2
12	PFFZZ	2530-01-311-8410	78500	A23105G1151	. PARTS KIT,BRAKE ADJ PART OF KIT P/N KIT8078.....	1
13	PFFZZ	4730-01-499-3385	78500	2297-B-5046	. FITTING,LUBRICATION.....	1
14	PAFZZ	5310-01-499-3459	3D6E9	WA-36	. WASHER,FLAT.....	4
15	PAFZZ	5310-00-261-7340	59556	019-00001-7	. WASHER,LOCK.....	4
16	PAFZZ	5305-01-315-3563	78500	10-X-1348	. SCREW,TAPPING PART OF KIT P/N KIT8078.....	4
17	PFFZZ	5365-00-753-4865	27618	10710P11	SPACER,RING.....	2
18	PAFZZ	5310-01-133-5373	78500	1229-B-1848	WASHER,FLAT PART OF KIT P/ N KIT8078.....	2
19	PFFZZ	5325-00-281-6623	96906	MS16624-125	RING,RETAINING PART OF KIT P/N KIT8078.....	2

END OF FIGURE

**FIELD MAINTENANCE
SERVICE BRAKE COMPONENTS**



RE5008

Figure 8. Service Brake Components.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1202 SERVICE BRAKES						
FIG. 8. SERVICE BRAKE COMPONENTS.						
1	PFFZZ	2530-01-499-5407	78500	SR2024707QP	SHOE AND LINING ASS PART OF KIT P/N KSMA2124707QP.....	4
2	PFFZZ	3120-00-322-6430	78500	2297T7222	ROLLER,LINEAR-ROTAR PART OF KIT P/N KSMA2124707QP.....	4
3	PFFZZ	5342-01-271-6326	338X5	3105B210	RETAINER,SPECIAL PART OF KIT P/N KSMA2124707QP.....	4
4	PFFZZ	5340-01-499-3618	3D6E9	3264-A-1457	CAP,PROTECTIVE,DUST DUST SHIELD..	2
5	PFFZZ	2530-00-406-6785	78500	1707B2	PLUG,DUST,SHIELD.....	4
6	PAFZZ	5305-01-556-1411	3DGR3	50172106	SCREW,CAP,HEXAGON H.....	8
7	PAFZZ	5310-01-556-1400	3DGR3	50995152	NUT,SELF-LOCKING,HE.....	4
8	PFFZZ	5315-00-482-1586	78500	1218G85	PIN,ANCHOR PART OF KIT P/N KSMA2124707QP.....	4
9	PFFZZ	5360-01-499-3396	89346	1693182C1	SPRING,HELICAL,COMP BLUE PART OF KIT P/N KSMA2124707QP.....	2
10	PFFZZ	5360-01-158-1974	78500	2258-Q-615	SPRING,HELICAL,EXTE ORANGE PART OF KIT P/N KSMA2124707QP.....	4
11	PFFZZ	5315-01-272-6607	338X5	577653C1	PIN,SHOULDER,HEADLE PART OF KIT P/N KSMA2124707QP.....	4
12	PFFZZ	3120-00-255-6042	78500	1225B496	BUSHING,SLEEVE PART OF KIT P/N KSMA2124707QP.....	4

END OF FIGURE

FIELD MAINTENANCE
SLACK ADJUSTER

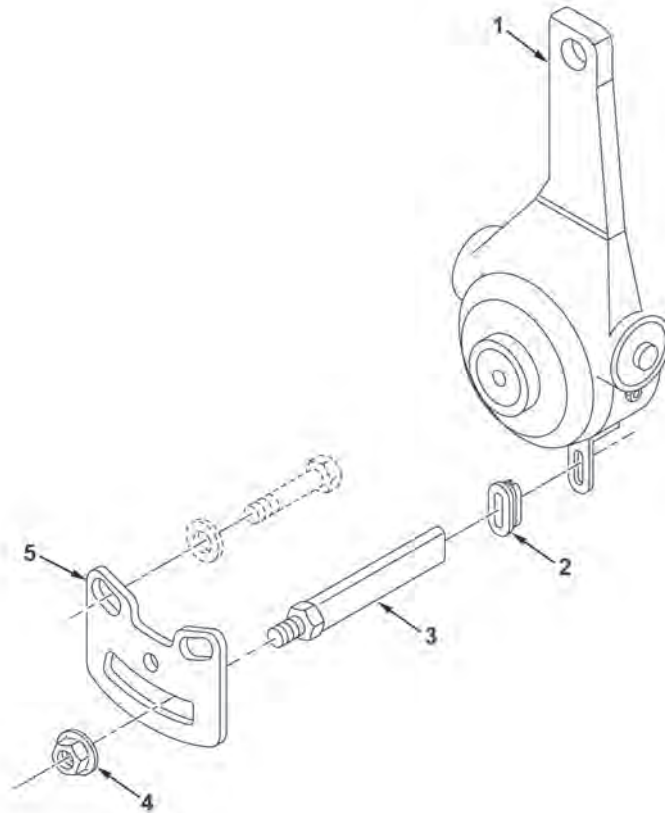


Figure 9. Slack Adjuster.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1206 MECHANICAL BRAKE SYSTEM						
FIG. 9. SLACK ADJUSTER.						
1	PFFZZ	2530-01-499-3399	06721	400 20211	ADJUSTER,SLACK,BRAK.....	2
2	PFFZZ	5365-01-499-3408	78502	452-10125	BUSHING,NONMETALLIC PART OF KIT P/N 42710558.....	4
3	PFFZZ	5340-01-499-3404	06721	443-10318	STANDOFF,THREADED,S PART OF KIT P/N 42710563, PART OF KIT P/N 42710558.....	4
4	PAFZZ	5310-01-499-3438	78502	443-10204	NUT,PLAIN,EXTENDED PART OF KIT P/N 42710563, PART OF KIT P/N 42710558.....	4
5	PFFZZ	5340-01-499-3405	06721	445-10467	BRACKET,MOUNTING PART OF KIT P/N 42710563, PART OF KIT P/N 42710558.....	4

END OF FIGURE

FIELD MAINTENANCE
ECU/VALVE ASSEMBLY

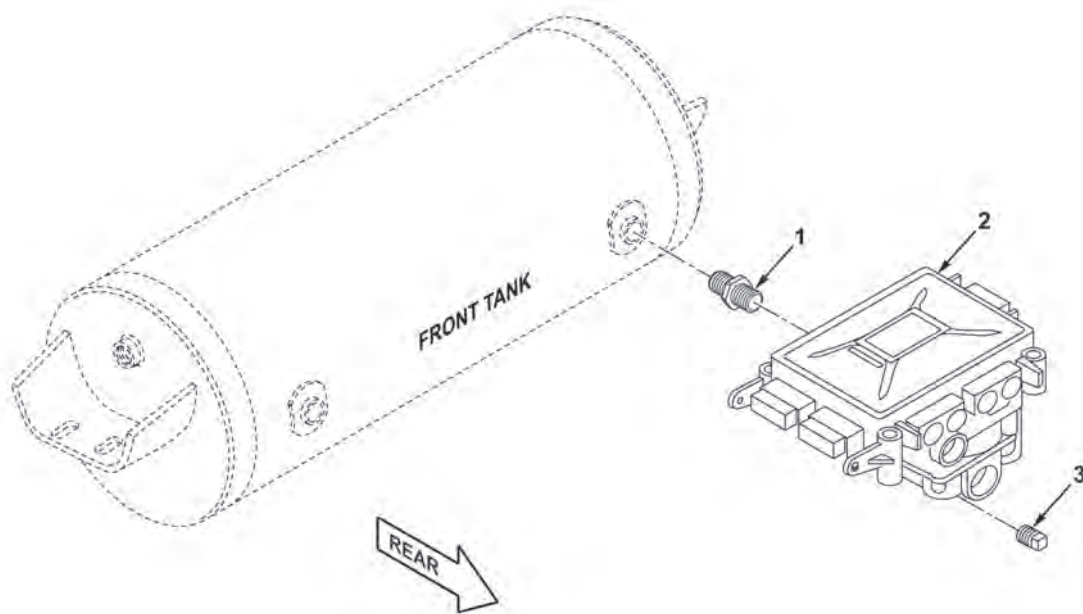


Figure 10. ECU/Valve Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
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**GROUP 1207 ELECTRICAL BRAKE
SYSTEM**

FIG. 10. ECU/VALVE ASSEMBLY.

1	PFFZZ	4730-01-499-3406	78500	AMP43726	NIPPLE,PIPE.....	1
2	PFFZZ	4810-01-499-3407	78500	S4005001030	VALVE ASSEMBLY ECU.....	1
3	PFFZZ	4730-01-499-4270	3DGR3	51205007	PLUG,PIPE 3/8" DIA.....	14

END OF FIGURE

FIELD MAINTENANCE
ABS BRAKE POWER HARNESS AND SENSOR

1
2

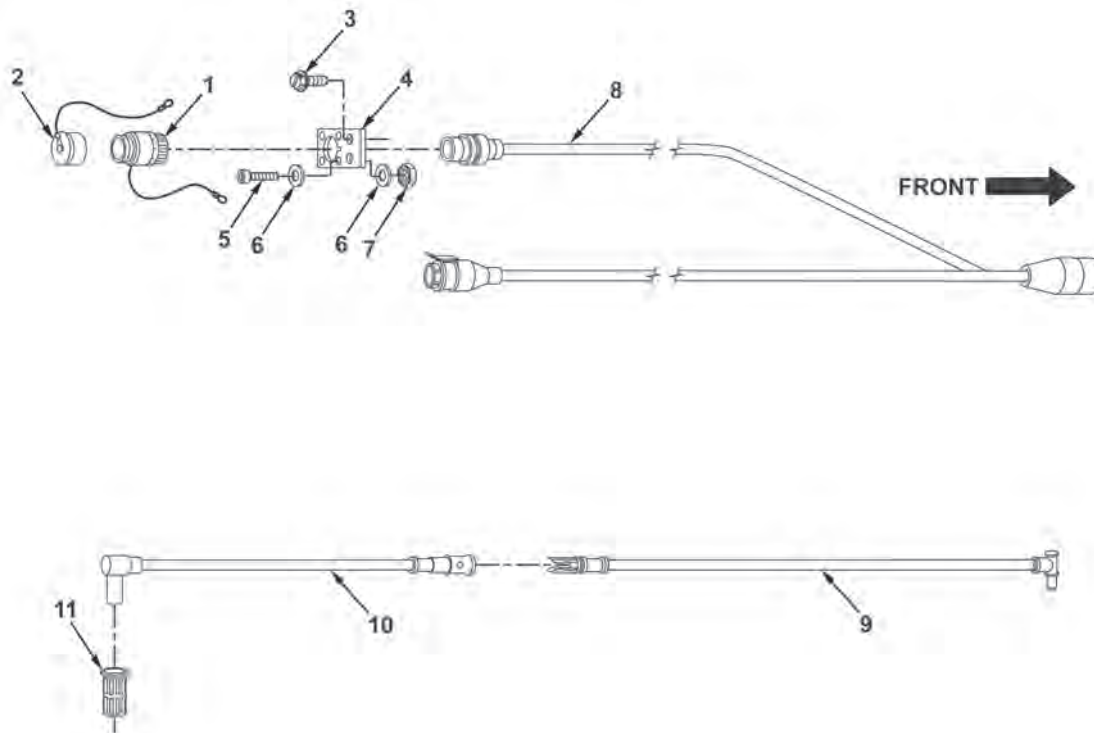


Figure 11. ABS Brake Power Harness and Sensor.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1207 ELECTRICAL BRAKE SYSTEM						
FIG. 11. ABS BRAKE POWER HARNESS AND SENSOR.						
1	PFFZZ	5935-01-480-6241	78500	2237-Z-1222	CONNECTOR,RECEPTACL BLINK CODE CONNECTOR.....	1
2	PFFZZ	5340-01-512-9064	78500	2237M1235	. CAP,PROTECTIVE,DUST.....	1
3	PFFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING 0.25 X 0.70.....	2
4	PFFZZ	2590-01-522-2672	78500	S3155-L-1234	BRACKET,VEHICULAR C.....	1
5	PAFZZ	5305-01-551-4703	39428	92196A130	SCREW,CAP,SOCKET HE #5-40.....	4
6	PAFZZ	5310-01-552-7435	39428	92141A006	WASHER,FLAT #5.....	8
7	PAFZZ	5310-00-045-8839	39428	91839A006	NUT,SELF-LOCKING,HE.....	4
8	PFFZZ	6150-01-499-3397	78500	S4493641530	CABLE ASSEMBLY,SPEC.....	1
9	PFFZZ	2530-01-499-3170	78500	S4497130300	SENSOR,ANTI-LOCK BR.....	4
10	PFFZZ	2530-99-782-3392	U6718	441 032 8080	SENSOR,ANTI-LOCK BR.....	2
11	PFFZZ	5340-01-499-3481	78500	R955458	CLIP,SPRING TENSION.....	2

END OF FIGURE

FIELD MAINTENANCE
AIR LINES AND FITTINGS

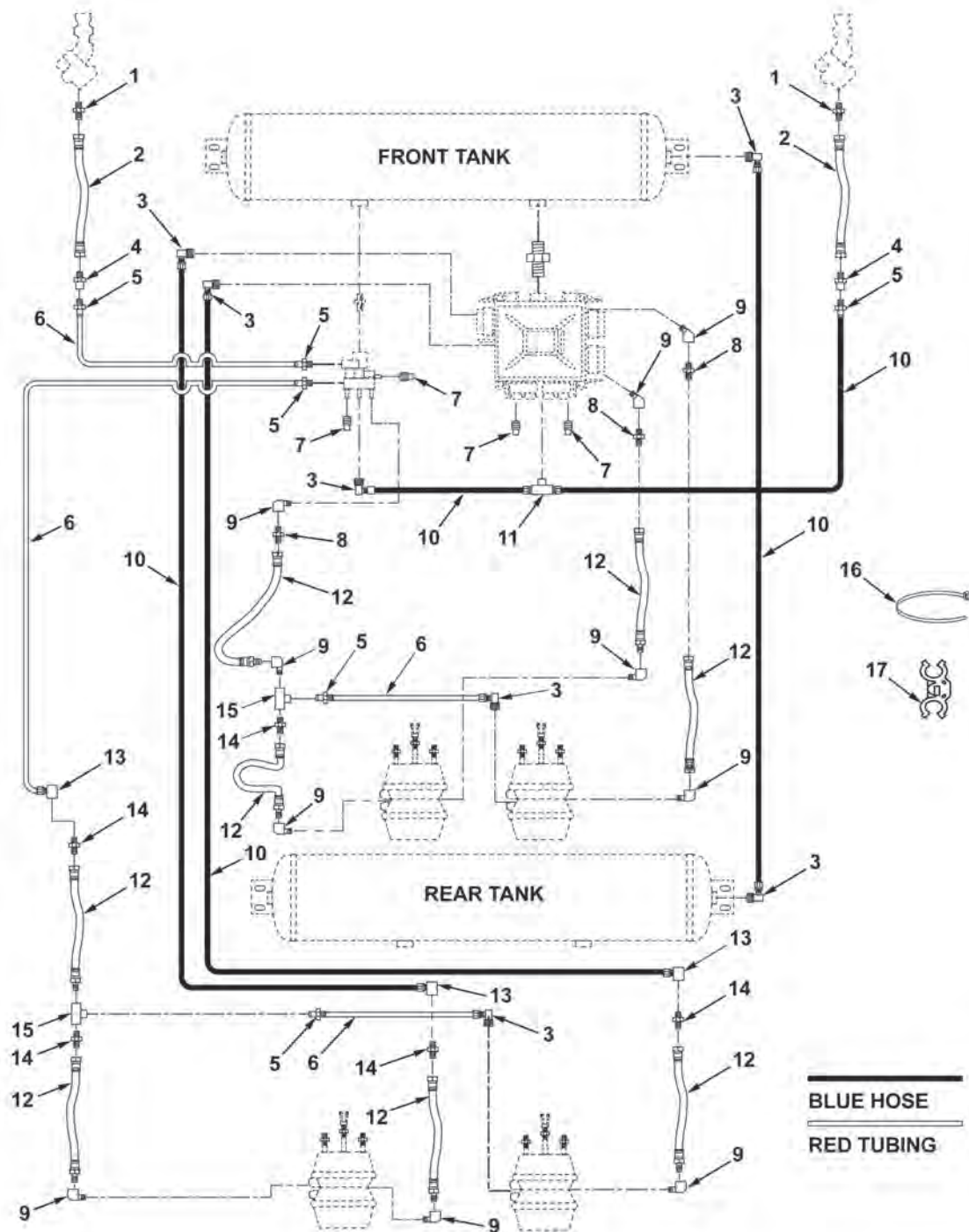
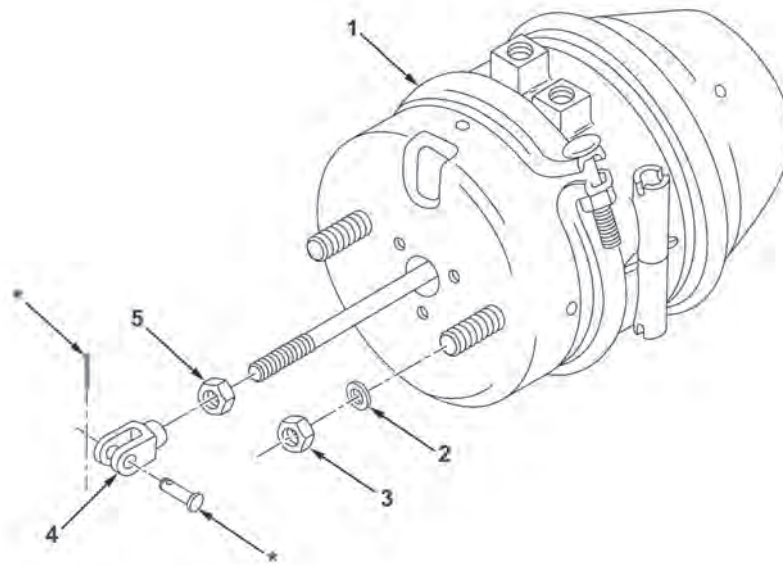


Figure 12. Air Lines and Fittings.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1208 AIR BRAKE SYSTEM						
FIG. 12. AIR LINES AND FITTINGS.						
1	PFFZZ	4730-01-096-9128	93061	68NTA-6-6	ADAPTER,STRAIGHT,PI 3/8" TUBE UOC: SCB	2
1	PFFZZ	4730-01-556-1422	3DGR3	50720025	ADAPTER,STRAIGHT,PI 3/8" TUBE 45 DEG. UOC: SJB	2
1	PFFZZ	4730-01-556-1420	3DGR3	50501006	ADAPTER,STRAIGHT,PI 3/8" TUBE UOC: SKB	2
2	PFFZZ	4720-01-556-2134	3DGR3	50866009	HOSE ASSEMBLY,NONME 3/8".....	2
3	PFFZZ	5935-01-224-1226	98278	MCDM1-31SS	CONNECTOR,RECEPTACL.....	7
4	PFFZZ	4730-01-556-1425	3DGR3	50104001	ADAPTER,STRAIGHT,TU 1/4-18 NPTF ID X 3/4-16 UNF OD.....	2
5	PFFZZ	4730-01-096-9128	93061	68NTA-6-6	ADAPTER,STRAIGHT,PI 3/8" TUBE.....	6
6	MFFZZ		61424	PFT-6B-RED-AR	HOSE,NONMETALLIC MAKE FROM HOSE P/N PFT-6B-RED 500, 3/8", CUT TO FIT.....	4
7	PFFZZ	4730-01-499-4270	3DGR3	51205007	PLUG,PIPE 3/8" DIA.....	4
8	PFFZZ	4730-00-202-6491	96906	MS14315-2X	BUSHING,PIPE.....	3
9	PFFZZ	4730-00-277-8257	36MV0	0716-MM5-U03	ELBOW,PIPE.....	10
10	MFFZZ		61424	PFT-6B-BLU-AR	TUBING,NONMETALLIC MAKE FROM TUBING P/N 1605340, 3/8", CUT TO FIT.....	5
11	PFFZZ	4730-01-283-1877	81343	SAE J246 6-6-6 100425BA	TEE,PIPE TO TUBE.....	1
12	PFFZZ	4720-01-499-3490	3DGR3	50866003	HOSE ASSEMBLY,NONME INCLUDES BUSHING PN 209P-6-4 (93061)	8
13	PFFZZ	4730-01-365-9072	1EFH8	2002391	ELBOW,PIPE TO TUBE.....	5
14	PFFZZ	4730-01-164-3365	93061	207ACBH-4	COUPLING,PIPE UOC: SCB,SKB	5
14	PFFZZ	4730-01-556-1426	3DGR3	50104002	ADAPTER,STRAIGHT,TU UOC: SJB	3
15	PFFZZ	4730-00-469-7797	0VC51	22602	TEE,PIPE.....	2
16	PFFZZ	4730-01-499-3709	93061	50487001	CLAMP,HOSE.....	4
17	PFFZZ	5340-01-499-3717	3DGR3	50491010	CLIP,RETAINING.....	12

END OF FIGURE

FIELD MAINTENANCE
AIR BRAKE CHAMBER



*Part of Item 4

Figure 13. Air Brake Chamber.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1208 AIR BRAKE SYSTEM						
FIG. 13. AIR BRAKE CHAMBER.						
1	PFFZZ	2530-01-504-2552	06721	166407	CHAMBER,AIR BRAKE LONG STROKE...	2
2	PAFZZ	5310-01-499-5412	06721	HW3	WASHER,FLAT.....	8
3	PAFZZ	5310-01-499-5416	3DGR3	50981049	NUT,SELF-LOCKING,AS 5/8-11.....	2
4	PFFZZ	2520-01-499-3439	3DGR3	52125333	UNIVERSAL JOINT,VEH INCLUDES YOKE, PIN, AND COTTER PIN.	4
5	PAFZZ	5310-00-880-7744	80204	ANSI B18.2.2	NUT,PLAIN,HEXAGON 5/8-18.....	4

END OF FIGURE

FIELD MAINTENANCE
AIR RESERVOIRS

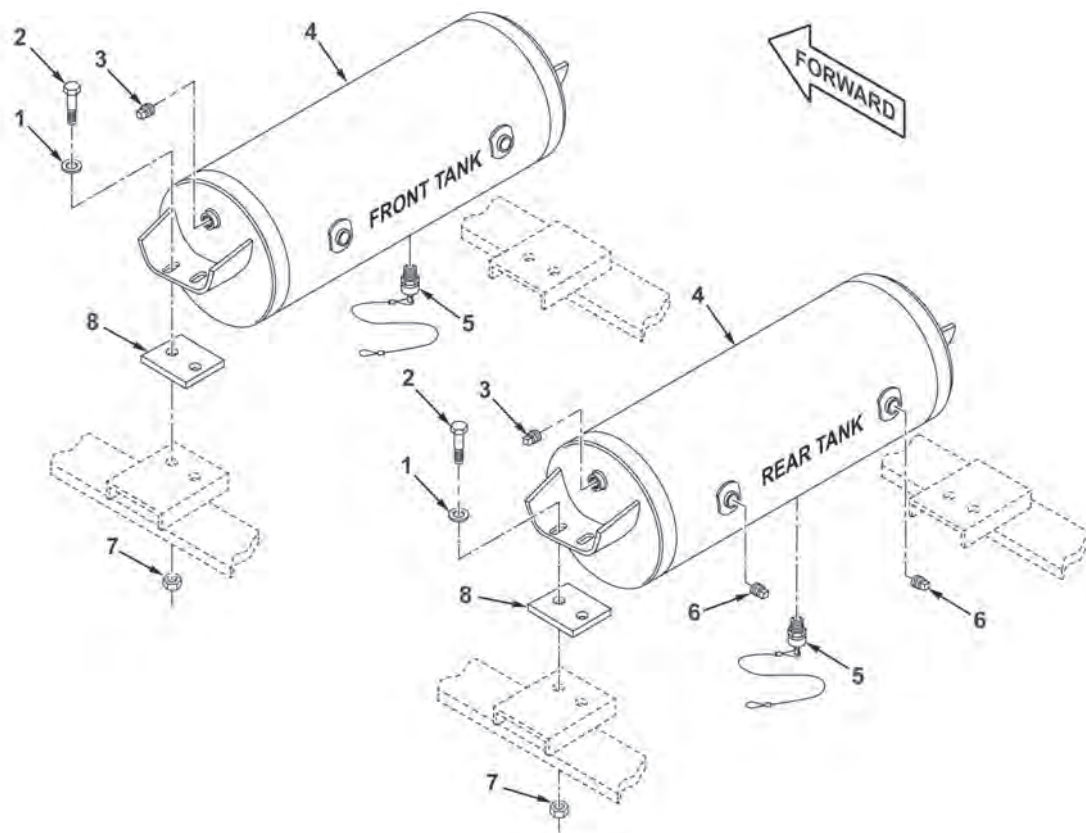


Figure 14. Air Reservoirs.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1208 AIR BRAKE SYSTEM						
FIG. 14. AIR RESERVOIRS.						
1	PAFZZ	5310-01-499-3461	3DGR3	55752005	WASHER,FLAT.....	8
2	PAFZZ	5305-01-499-3465	3DGR3	50172008	SCREW,CAP,HEXAGON H.....	8
3	PFFZZ	4730-01-499-4270	3DGR3	51205007	PLUG,PIPE 3/8" DIA.....	2
4	PFFZZ	2530-01-499-3629	3DGR3	51475007	TANK,PRESSURE FRONT PRIMARY AND REAR RESERVE.....	2
5	PFFZZ	4820-01-499-3653	0N972	401095	COCK,DRAIN.....	2
6	PFFZZ	4730-01-499-3360	3DGR3	51205015	PLUG,PIPE 3/4".....	2
7	PAFZZ	5310-01-499-3456	3DGR3	50995054	NUT,SELF-LOCKING,HE.....	8
8	PFFZZ	9320-01-499-3458	3DGR3	51029007	RUBBER SHEET,SOLID.....	4

END OF FIGURE

FIELD MAINTENANCE
AIR BRAKE CHAMBER CONTROL VALVE

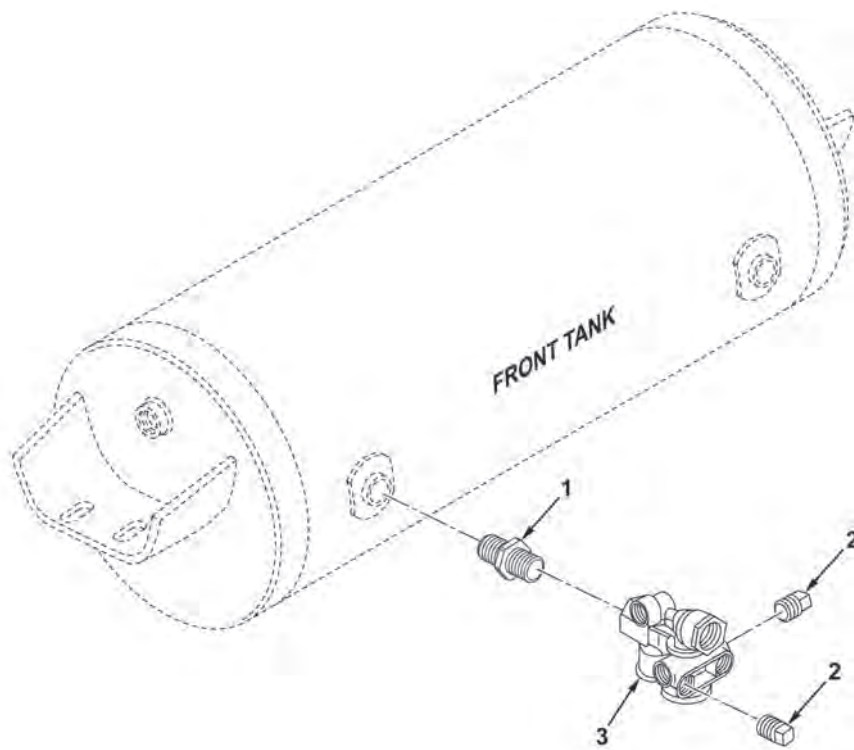


Figure 15. Air Brake Chamber Control Valve.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
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GROUP 1208 AIR BRAKE SYSTEM**FIG. 15. AIR BRAKE CHAMBER
CONTROL VALVE.**

1	PFFZZ	4730-01-499-3663	78500	50979015	REDUCER,PIPE 1/2" TO 3/4".....	1
2	PFFZZ	4730-01-499-4270	3DGR3	51205007	PLUG,PIPE 3/8" DIA.....	2
3	PFFZZ	4820-01-497-8729	10125	110500	VALVE,CHECK.....	1

END OF FIGURE

FIELD MAINTENANCE
GLADHANDS

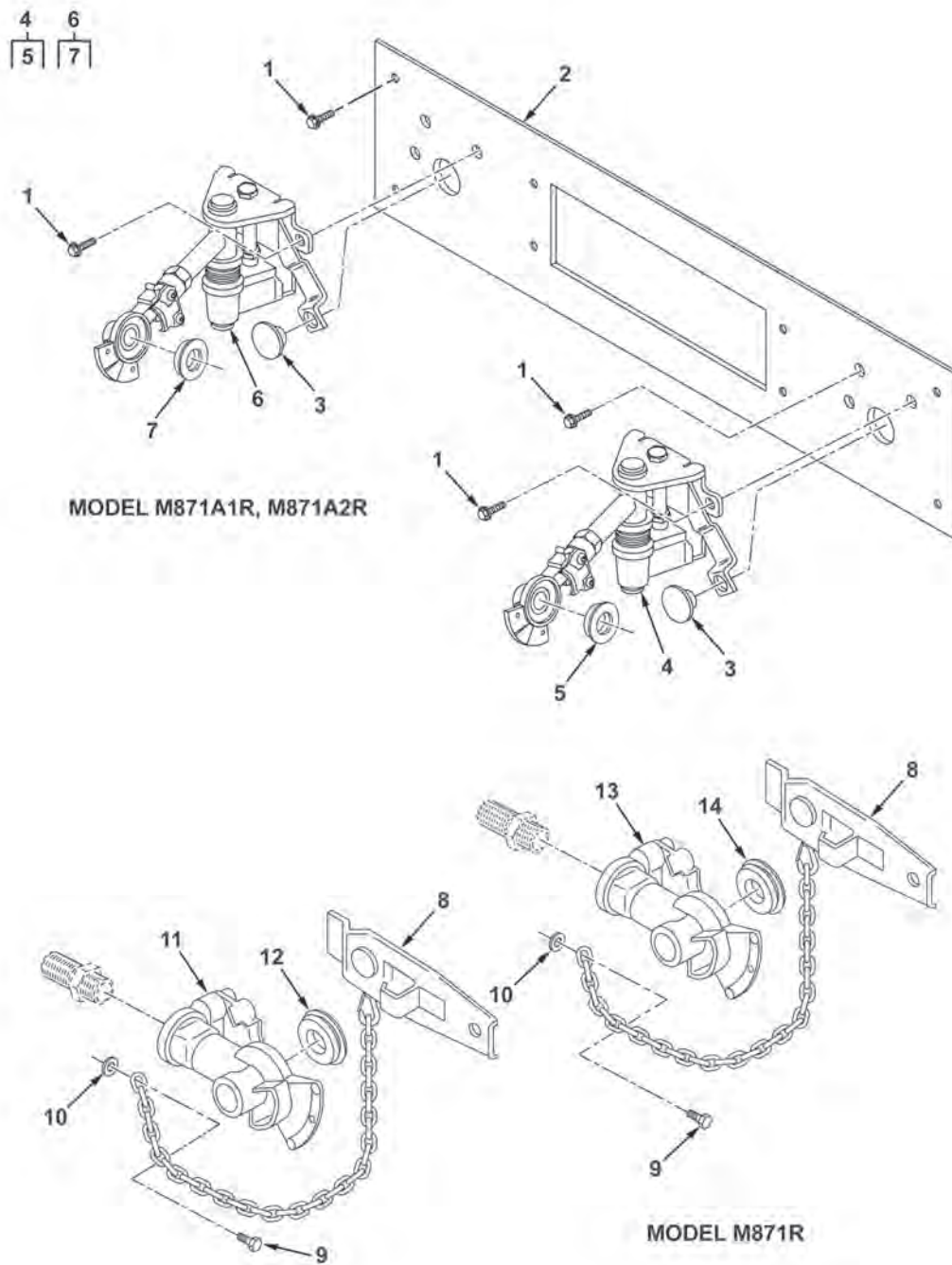


Figure 16. Gladhands.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1208 AIR BRAKE SYSTEM						
FIG. 16. GLADHANDS.						
1	PAFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING UOC: SCB,SKB	14
2	PFFZZ	5340-01-557-8520	3DGR3	65340002	PLATE,MOUNTING UOC: SCB,SKB	1
3	PFFZZ	5340-01-551-8607	09YD1	QSC-441721	CAP,PROTECTIVE,DUST UOC: SCB,SKB	2
4	PFFFF	4730-01-499-3471	0N972	441105	CONNECTOR,SWIVEL FL EMERGENCY UOC: SCB,SKB	1
5	PFFZZ	5330-01-504-8614	45152	4HA892	. SEAL,PLAIN RED UOC: SCB,SKB	1
6	PFFFF	4730-01-499-3471	0N972	441105	CONNECTOR,SWIVEL FL SERVICE UOC: SCB,SKB	1
7	PFFZZ	5330-01-504-8610	45152	4HA891	. SEAL,PLAIN BLUE UOC: SCB,SKB	1
8	PFFZZ	2530-01-556-1664	3DGR3	50823046	DUMMY COUPLING,AUTO UOC: SJB	2
9	PAFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING UOC: SJB	2
10	PAFZZ	5310-01-556-1277	3DGR3	50823047	WASHER,FLAT UOC: SJB	2
11	PFFZZ	4730-01-556-1415	3DGR3	50823044	COUPLING HALF,QUICK SERVICE, STRAIGHT UOC: SJB	1
12	PFFZZ	5330-01-504-8610	45152	4HA891	SEAL,PLAIN BLUE UOC: SJB	1
13	PFFZZ	4730-01-557-1926	3DGR3	50823045	COUPLING HALF,QUICK EMERGENCY,STRAIGHT UOC: SJB	1
14	PFFZZ	5330-01-504-8614	45152	4HA892	SEAL,PLAIN RED UOC: SJB	1

END OF FIGURE

FIELD MAINTENANCE
HUB AND DRUM

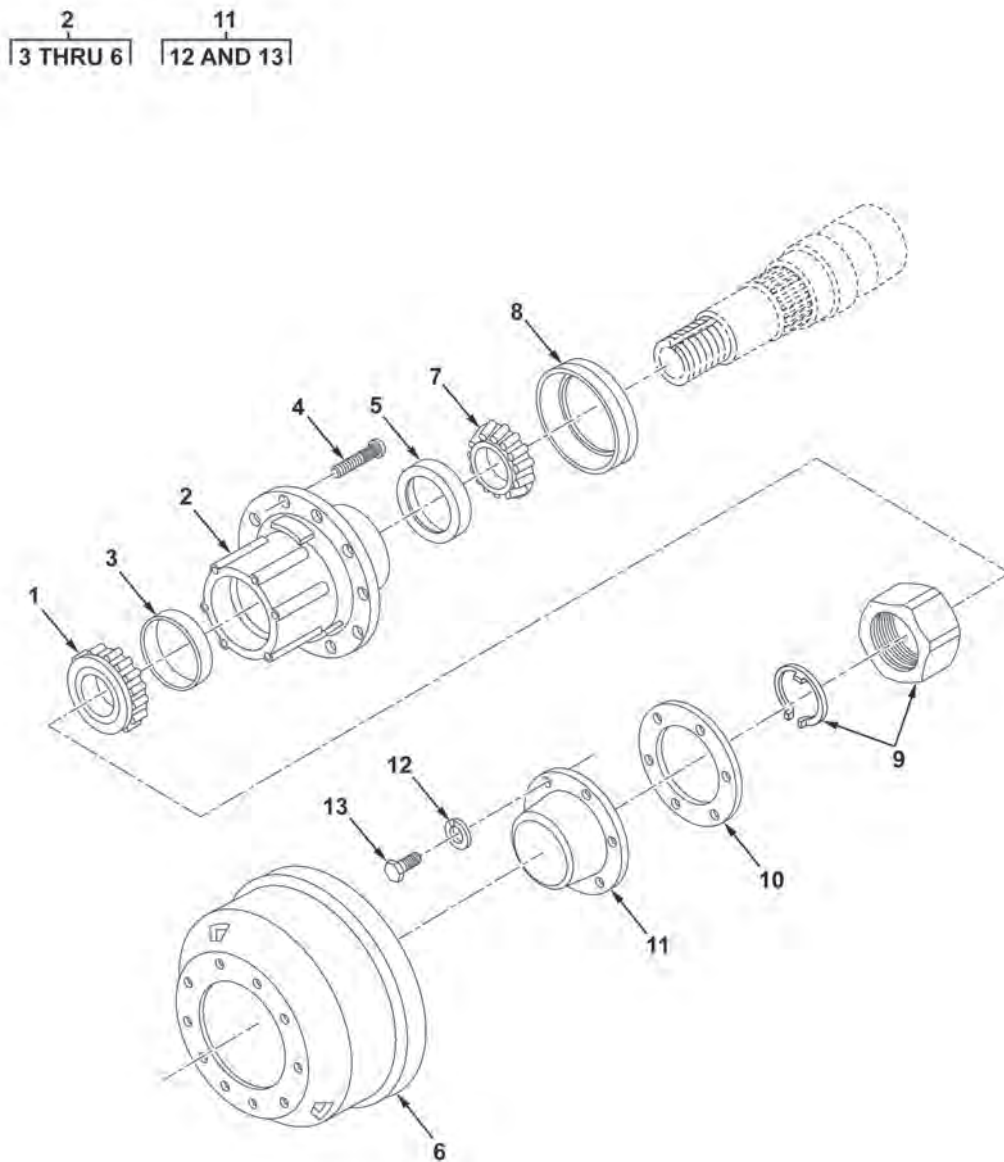


Figure 17. Hub and Drum.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1311 WHEEL ASSEMBLY						
FIG. 17. HUB AND DRUM.						
1	PFFZZ	3110-00-293-8998	338X5	TMHM212049	CONE AND ROLLERS,TA OUTER.....	2
2	PAFZZ	2530-01-499-3476	18889	20231UH3T	HUB,WHEEL,VEHICULAR INCLUDES TONE RING, (10) R/H STUDS, INNER & OUTER BEARING CUPS	2
3	PFFZZ	3110-00-293-8997	77237	RSC-03279	. CUP,TAPERED ROLLER OUTER.....	1
4	PFFZZ	5307-01-440-1364	18889	101162	. STUD,PLAIN ALL RH.....	10
5	PFFZZ	3110-00-618-0249	60038	HM218210	. CUP,TAPERED ROLLER INNER.....	1
6	PAFZZ	2530-01-449-9475	18889	66884	. BRAKE DRUM.....	1
7	PFFZZ	3110-00-618-0248	63576	31-26-2	CONE AND ROLLERS,TA.....	2
8	PFFZZ	5330-01-090-2107	01212	B370025BG2	SEAL,PLAIN.....	2
9	PAFZZ	5310-01-499-5416	3DGR3	50981049	NUT,SELF-LOCKING,AS PRO- TORQ WITH KEEPER, 2 PER AXLE 5/8-11.	2
10	PFFZZ	5330-01-499-3487	80201	453795	GASKET.....	2
11	PFFZZ	2530-01-499-5421	80201	1343	HUB CAP,WHEEL INCLUDES HUBCAP, (6) BOLTS & WASHERS.....	2
12	PAFZZ	5310-00-407-9566	19207	7410218	. WASHER,LOCK 5/16".....	6
13	PAFZZ	5306-00-226-4827	80204	B1821BH031C100N	. BOLT,MACHINE 5/16-18 X 1.00".....	6

END OF FIGURE

FIELD MAINTENANCE
WHEEL ASSEMBLY

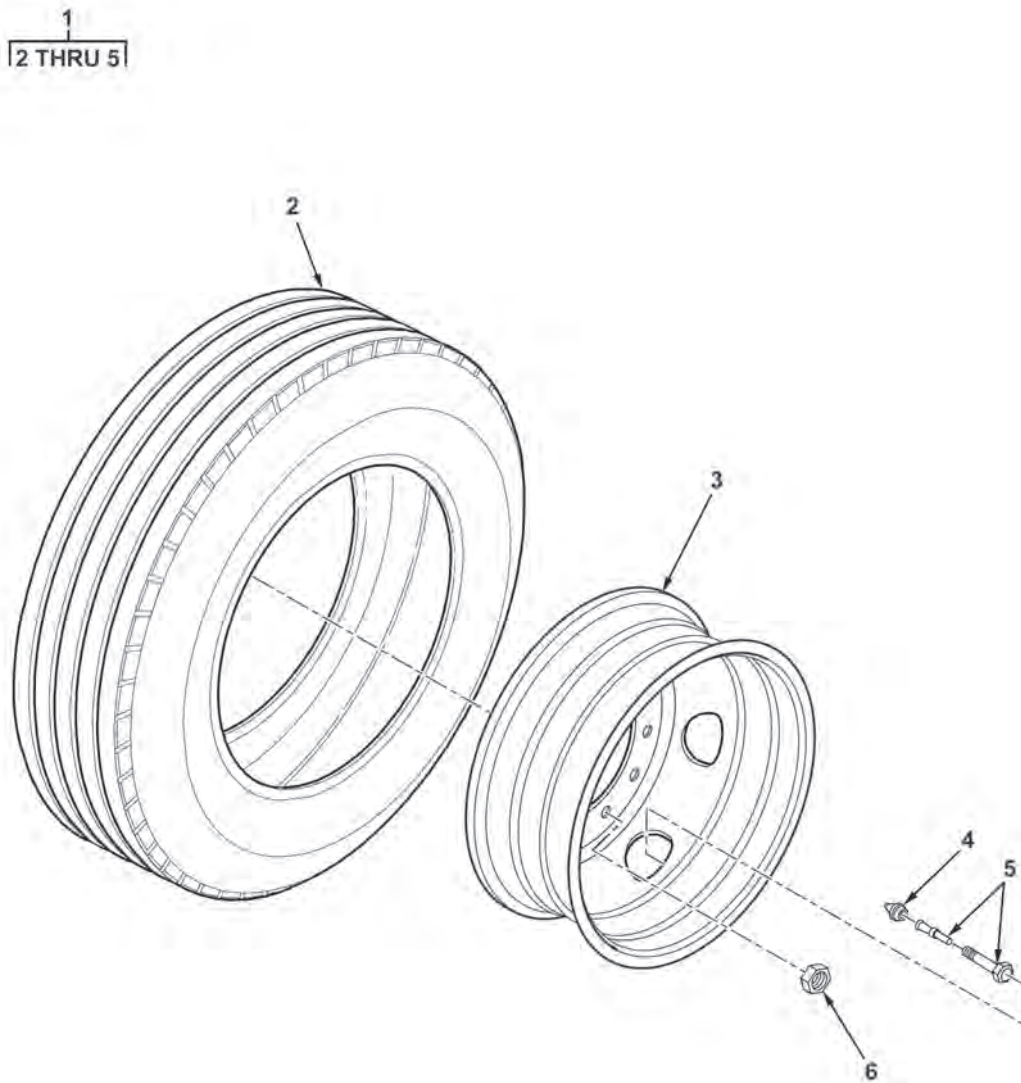
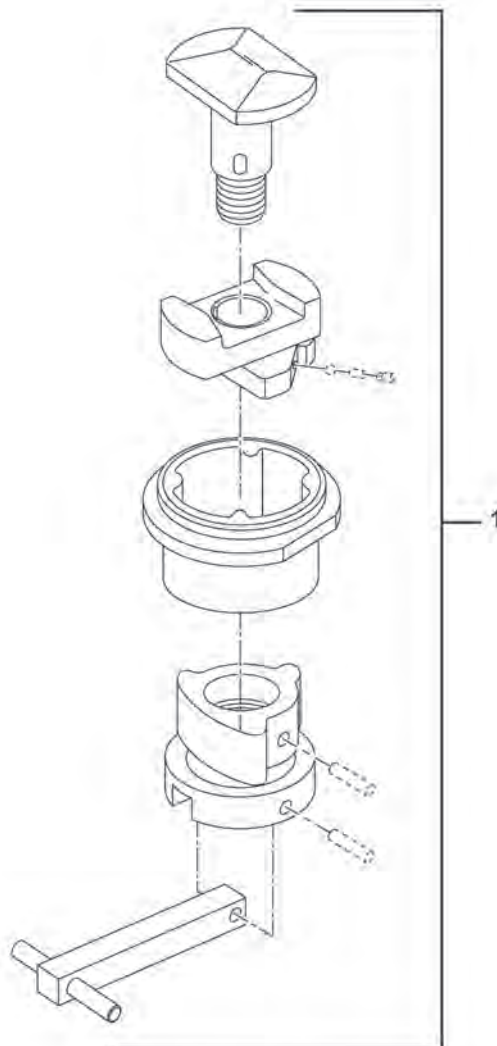


Figure 18. Wheel Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1311 WHEEL ASSEMBLY						
FIG. 18. WHEEL ASSEMBLY.						
1	PFFZZ	2530-01-584-7914	19207	12548842	WHEEL,PNEUMATIC TIR ONE PIECE/RADIAL HUB PILOTED, FOR 11R/22.5 TIRES.....	9
2	PCFZZ	2610-01-569-2153	12195	67042	. TIRE,PNEUMATIC,VEHI RADIAL,TUBELESS 255/11R 22.5XZE* P-METRIC.....	1
3	PFFZZ	2530-01-478-7603	73195	50408PG	. WHEEL,PNEUMATIC TIR ONE PIECE, HUB PILOTED, WHEEL ONLY 22.5 X 8.5.....	1
4	PFFZZ	2640-01-098-2029	39BV2	627-100-GOVT	. CAP,PNEUMATIC VALVE.....	1
5	PFFZZ	2640-00-555-2823	58536	A-A-52611-2-2- TR572	. VALVE,PNEUMATIC TIR.....	1
6	PFFZZ	5310-01-499-3489	3DGR3	50990007	NUT,PLAIN,HEXAGON FLANGE NUT, RH.....	80

END OF FIGURE

**FIELD MAINTENANCE
RETRACTABLE TWISTLOCK**



**MODELS
M871R
M871A1R**

Figure 19. Retractable Twistlock. (Sheet 1 of 2)

2
3 THRU 7

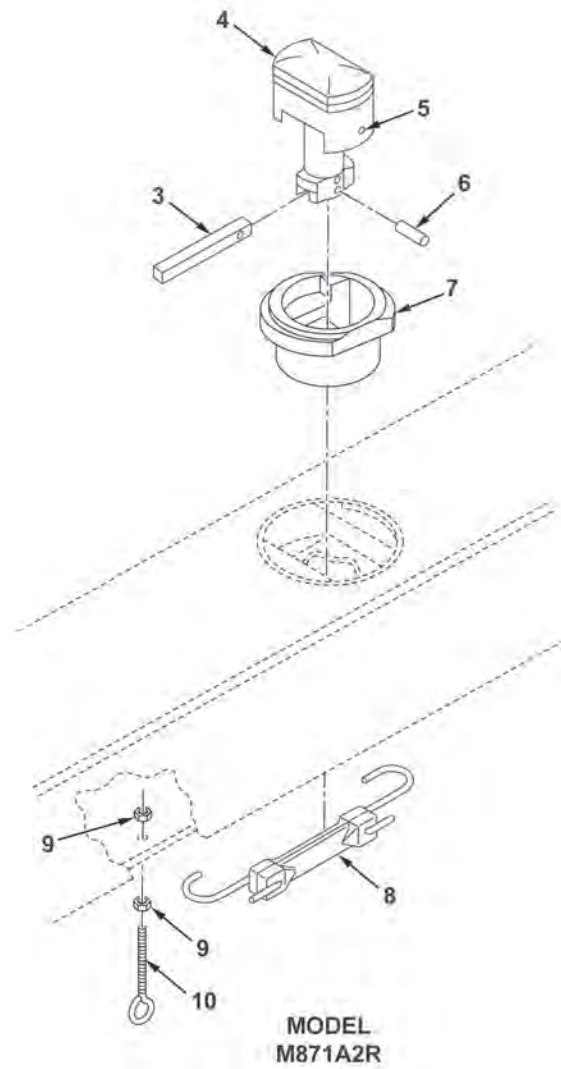


Figure 19. Retractable Twistlock. (Sheet 2 of 2)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1501 FRAME ASSEMBLY						
FIG. 19. RETRACTABLE TWISTLOCK.						
1	PFFZZ	5340-01-209-6524	65059	78038-1	LOCK,RIM TWISTLOCK ASSY UOC: SCB,SJB	4
2	PFFFF	5325-01-514-9957	94658	F804-1-3	FASTENER ASSEMBLY,T TWISTLOCK ASSY, ISO W/SOCKET (CUP) UOC: SKB	4
3	KFFZZ		94658	HANDLE-1	. HANDLE PART OF KIT P/N RK804-1B UOC: SKB	1
4	PFFZZ	2510-01-499-4290	94658	F804-1-4	. KIT,TWISTLOCK REPAI CONE (LOCATION TRUNK) ONLY PART OF KIT P/N RK804-1A UOC: SKB	1
5	PFFZZ	4730-00-050-4203	72447	500174-1	. FITTING,LUBRICATION UOC: SKB	1
6	KFFZZ		94658	PRP08-36L	. PIN PART OF KIT P/N RK804-1B UOC: SKB	1
7	XDFZZ		94658	PH2969-1	. CUP SOCKET UOC: SKB	1
8	PAFZZ	5340-01-317-2657	1F926	6	STRAP,ELASTIC UOC: SKB	4
9	PAFZZ	5310-01-251-7570	60110	2348-10308-40	NUT,PLAIN,HEXAGON UOC: SKB	8
10	PAFZZ	5306-01-222-9071	39428	9489T13	BOLT,EYE UOC: SKB	4

END OF FIGURE

FIELD MAINTENANCE
LIFTING, TIEDOWN RING, LADDER, COVER PLATE, AND RELATED PARTS

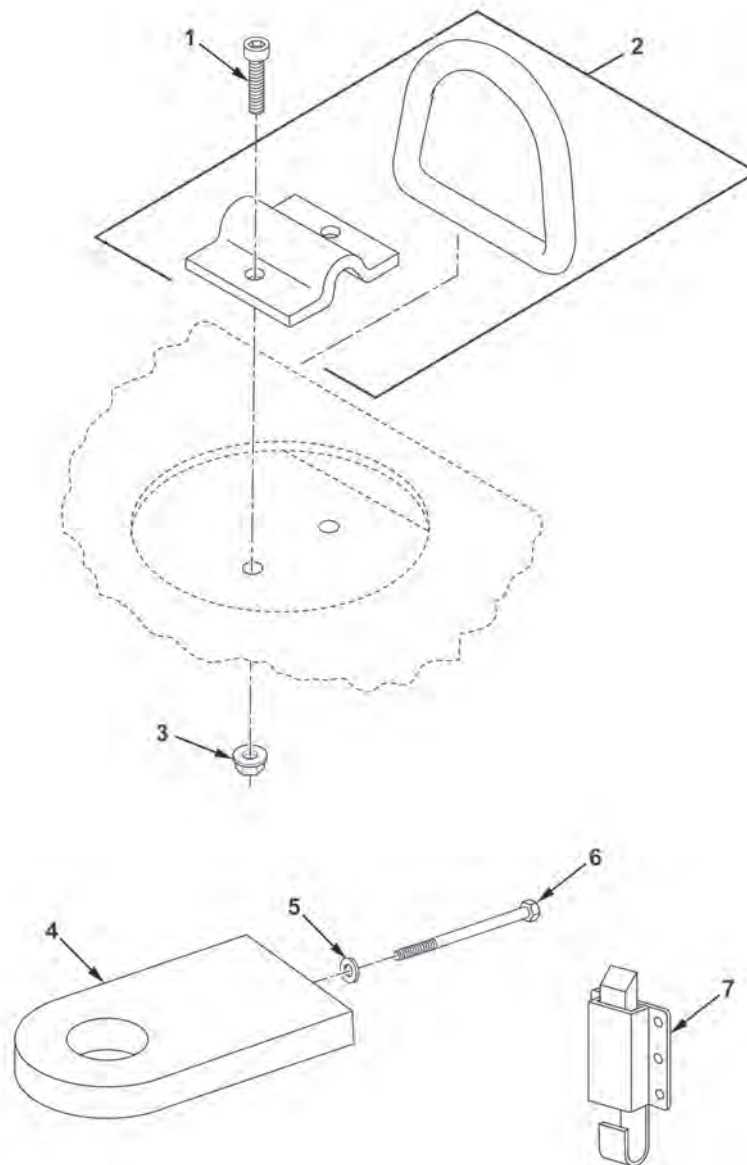


Figure 20. Lifting, Tiedown Ring, Ladder, Cover Plate, and Related Parts. (Sheet 1 of 3)

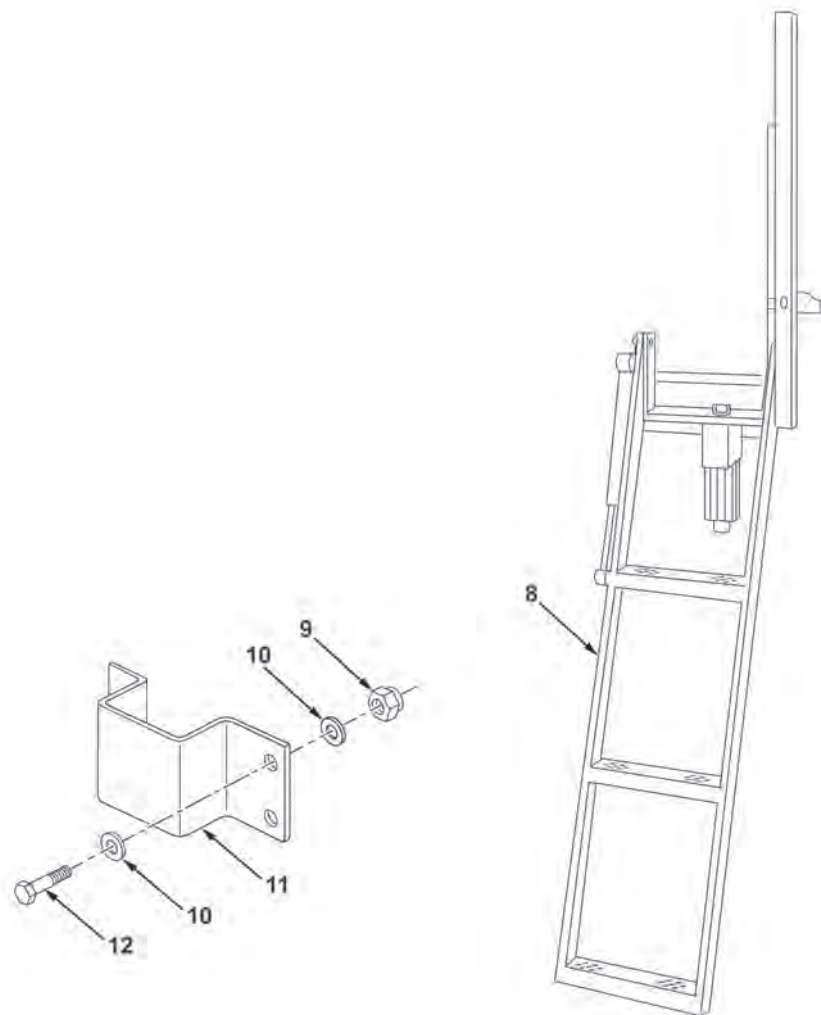


Figure 20. Lifting, Tiedown Ring, Ladder, Cover Plate, and Related Parts. (Sheet 2 of 3)

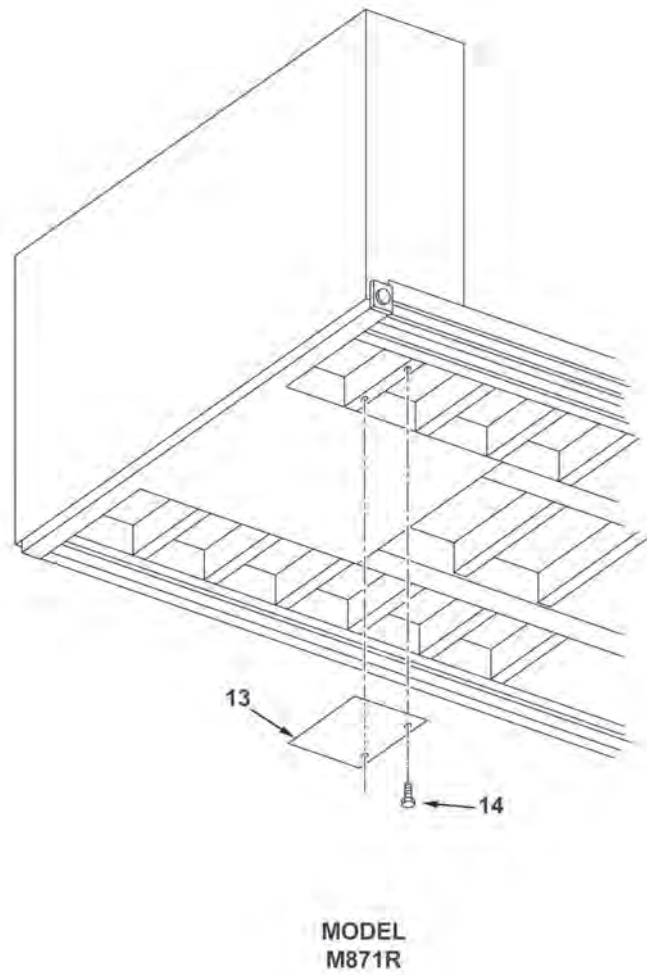


Figure 20. Lifting, Tiedown Ring, Ladder, Cover Plate, and Related Parts. (Sheet 3 of 3)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1501 FRAME ASSEMBLY						
FIG. 20. LIFTING, TIEDOWN RING, LADDER, COVER PLATE, AND RELATED PARTS.						
1	PAFZZ	5305-01-432-1763	70034	3/8-16X1-1/2 SHCS	SCREW,CAP,SOCKET HE 3/8-16 X 1.50".....	20
2	PFFZZ	5365-01-314-6592	087Q2	F187-20-8	RING,DEE.....	10
3	PAFZZ	5310-01-509-2488	81349	M45913/3-6CG8C	NUT,SELF-LOCKING,HE 3/8-13.....	20
4	PFFZZ	5340-01-239-0890	66788	SAT-18315	PAD EYE UOC: SCB,SJB	4
5	PAFZZ	5310-00-087-7493	96906	MS27183-13	WASHER,FLAT UOC: SCB,SJB	4
6	PAFZZ	5305-00-071-2072	80204	B1821BH050C225N	SCREW,CAP,HEXAGON H UOC: SCB,SJB	4
7	PFFZZ	5340-01-318-6775	06CB9	BF90M45XXZNXX	LOCK,FLUSH UOC: SCB,SJB	4
8	PFFZZ	2541-01-531-4064	05SD1	2511	LADDER,VEHICLE BOAR.....	1
9	PAFZZ	5310-00-488-3889	81349	M45913/3-8CG8C	NUT,SELF-LOCKING,HE.....	4
10	PAFZZ	5310-00-080-6004	96906	MS27183-14	WASHER,FLAT	8
11	PFFZZ	2590-01-532-8937	3DGR3	61251004	BRACKET,VEHICULAR C.....	1
12	PAFZZ	5305-00-071-2069	80204	B1821BH050C150N	SCREW,CAP,HEXAGON H.....	4
13	PFFZZ	5340-01-556-1428	3DGR3	64014008	COVER,ACCESS UOC: SJB	1
14	PAFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING UOC: SJB	2

END OF FIGURE

FIELD MAINTENANCE
SPARE TIRE CARRIER

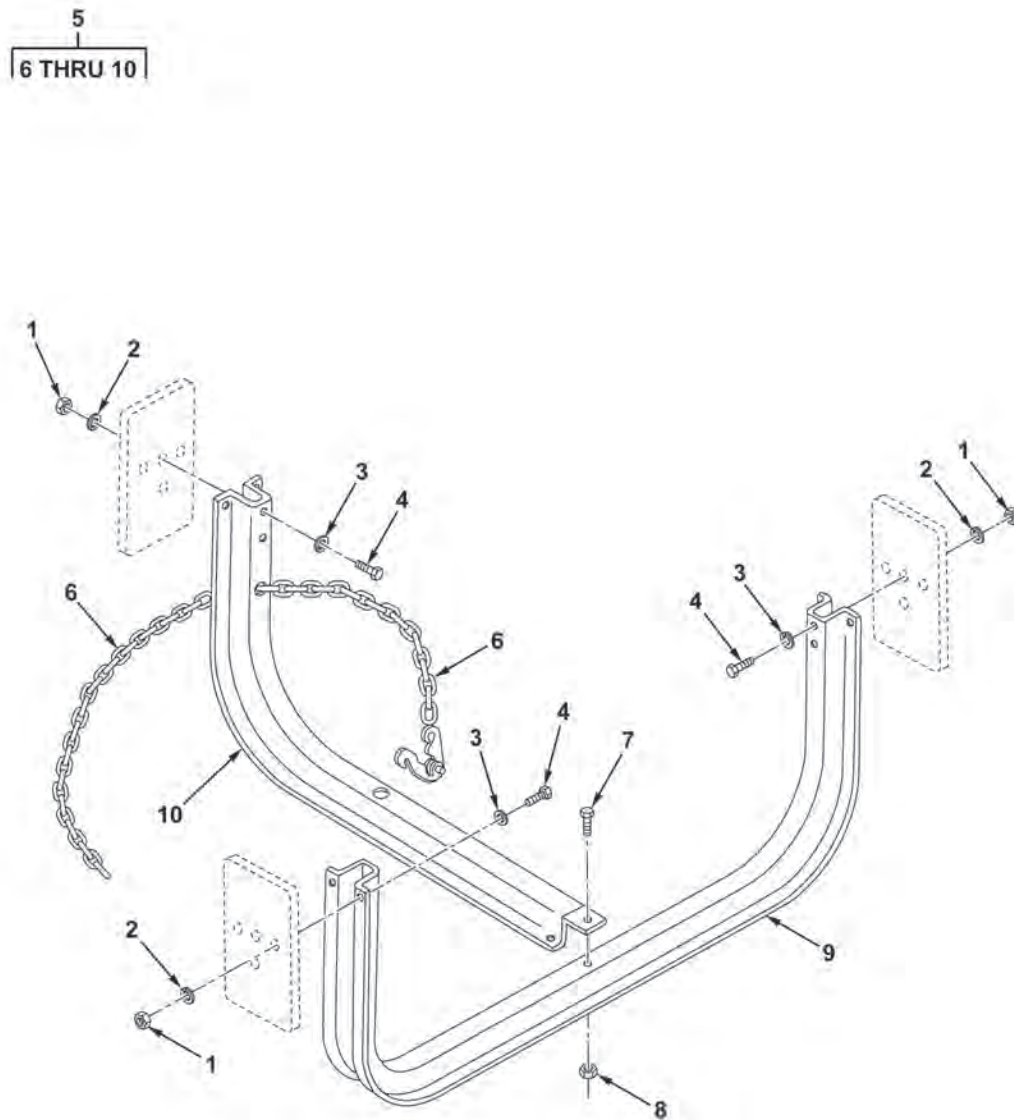


Figure 21. Spare Tire Carrier.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1504 SPARE WHEEL CARRIER AND TIRE LOCK						
FIG. 21. SPARE TIRE CARRIER.						
1	PAFZZ	5310-01-509-2488	81349	M45913/3-6CG8C	NUT,SELF-LOCKING,HE 3/8-16".....	12
2	PAFZZ	5310-00-637-9541	59556	019-00004-42	WASHER,LOCK 3/8".....	12
3	PAFZZ	5310-00-080-6004	96906	MS27183-14	WASHER,FLAT 3/8".....	12
4	PAFZZ	5305-00-725-2317	80204	B1821BH038C150N	SCREW,CAP,HEXAGON H 3/8-16 X 1.50"	6
5	PFFFF	2590-01-241-6060	99411	TS0002	CARRIER ASSEMBLY,TI.....	1
6	PFFZZ	2590-01-315-2610	99411	CP3473	. PARTS KIT,TIRE CARR 3/16 X 1 5/8" X 5.5FT LONG.....	2
7	PAFZZ	5305-00-543-4372	80204	B1821BH038C075N	. SCREW,CAP,HEXAGON H 3/8-16 X 3/4"	3
8	PAFZZ	5310-01-509-2488	81349	M45913/3-6CG8C	. NUT,SELF-LOCKING,HE 3/8-16".....	3
9	XAFZZ		99411	TS0013	. FRAME,U.....	1
10	XAFZZ		99411	CP0540	. FRAME,REAR.....	1

END OF FIGURE

FIELD MAINTENANCE
KINGPIN

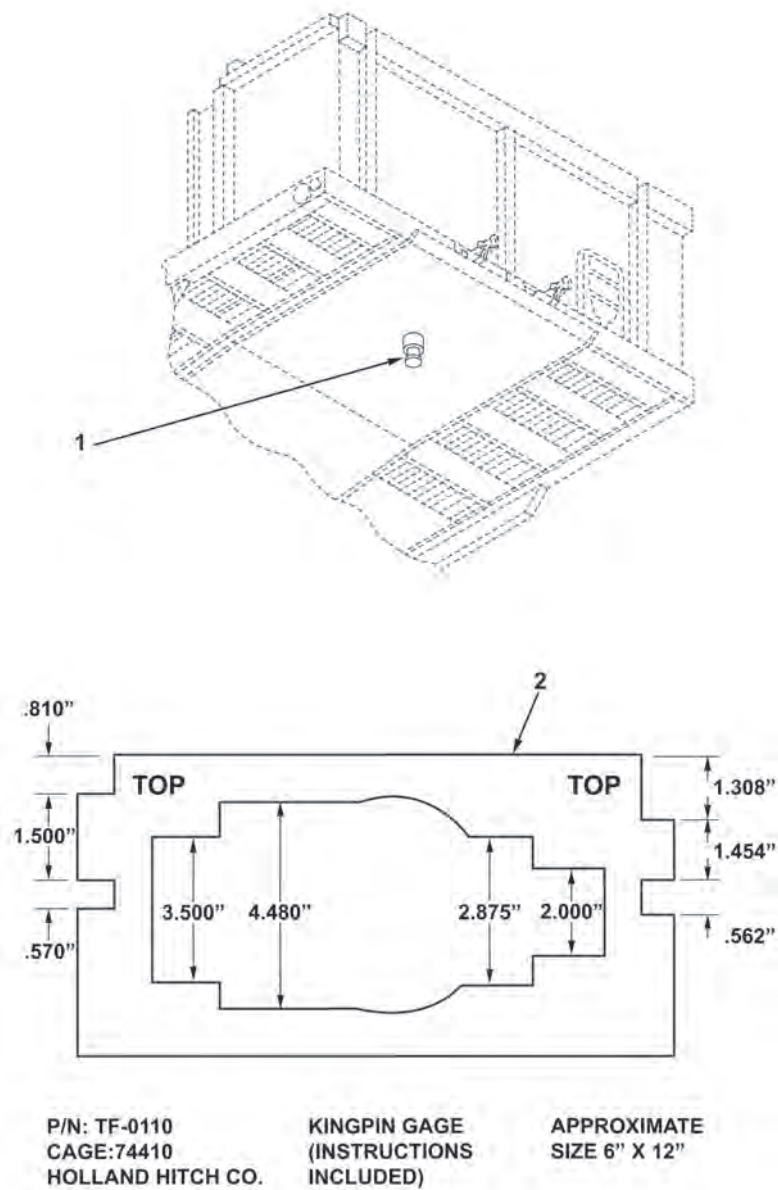


Figure 22. Kingpin.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1506 FIFTH WHEEL						
FIG. 22. KINGPIN.						
1	PFDZZ	2510-01-521-8635	74410	KP-AAR-4	KINGPIN,FIFTH WHEEL 5.5" SQ BASE UOC: SCB,SJB	1
1	PFDZZ	2510-01-315-6287	74410	KP-T-809-F	KINGPIN,FIFTH WHEEL 8.0" DIA ROUND BASE UOC: SKB	1
2	PFFZZ	5220-01-521-8643	74410	TF-0110	GAGE,PROFILE.....	1
END OF FIGURE						

FIELD MAINTENANCE
LANDING GEAR

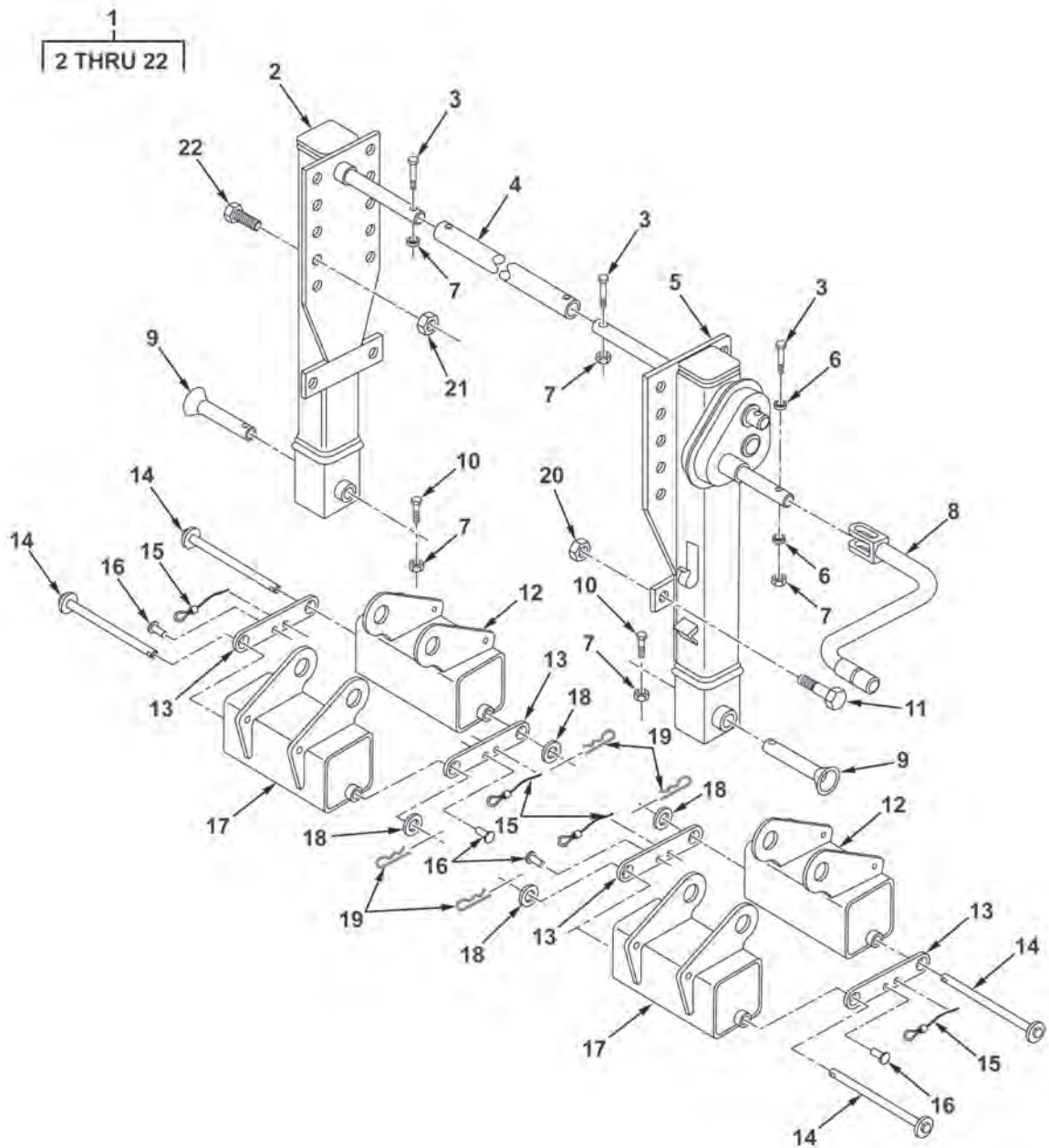


Figure 23. Landing Gear. (Sheet 1 of 2)

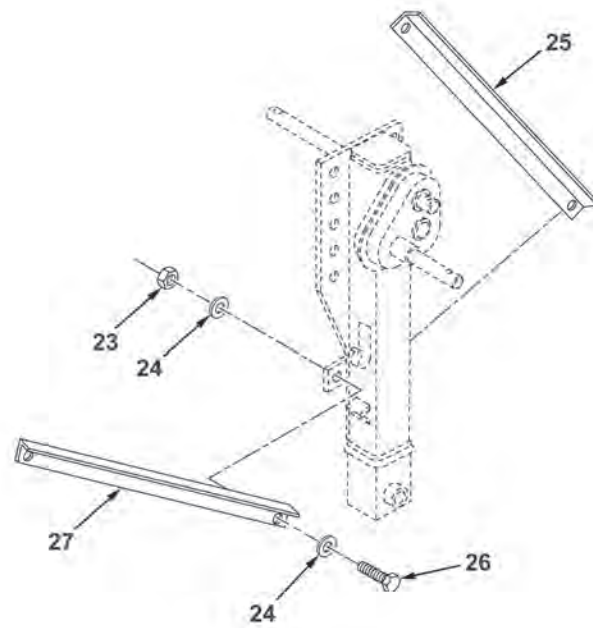


Figure 23. Landing Gear. (Sheet 2 of 2)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1507 LANDING GEAR, LEVELING JACKS (MECHANICAL OR HYDRAULIC)						
FIG. 23. LANDING GEAR.						
1	PFFFF	2590-01-597-8904	3DGR3	61000010	SUPPORT,RETRACTABLE COMPLETE LANDING LEG ASSEMBLY UOC: SKB	1
1	PFFFF	2590-01-556-1332	3DGR3	61000048	SUPPORT,RETRACTABLE COMPLETE LANDING LEG ASSEMBLY UOC: SCB	1
1	PFFFF	2590-01-556-2068	3DGR3	61000034	SUPPORT,RETRACTABLE COMPLETE LANDING LEG ASSEMBLY UOC: SJB	1
2	PFFZZ	2590-01-499-5434	3DGR3	50890077	. SUPPORT,RETRACTABLE LH UOC: SKB	1
2	PFFZZ	5305-01-556-1408	3DGR3	61000035	. SCREW,CAP,HEXAGON H Actual name for the part is SUPPORT,RETRACTABLE LH UOC: SCB,SJB	1
3	PAFZZ	5305-00-269-3217	80205	MS90725-67	. SCREW,CAP,HEXAGON H.....	3
4	PFFZZ	2590-01-556-1718	3DGR3	58080045	. SUPPORT,RETRACTABLE Actual name for the part is SHAFT,CROSS DRIVE 32 3/8" LONG.....	1
5	PFFZZ	5310-01-556-9152	3DGR3	61000036	. WASHER,FLAT Actual name for the part is SUPPORT,RETRACTABLE RH UOC: SCB,SJB	1
5	PFFZZ	2590-01-499-5437	3DGR3	50890078	. SUPPORT,RETRACTABLE RH UOC: SKB	1
6	PAFZZ	5310-01-174-0431	99411	PP0016-03	. WASHER,FLAT.....	2
7	PAFZZ	5310-01-126-9404	7X677	9422297	. NUT,SELF-LOCKING,HE.....	5
8	PFFZZ	5340-01-175-0564	99411	LG0083-05	. CRANK,HAND.....	1
9	PFFZZ	5315-01-316-7547	99411	LG0070-02	. PIN,STRAIGHT,HEADLE.....	2
10	PAFZZ	5305-00-115-9526	80204	B1821BH038C075D	. SCREW,CAP,HEXAGON H.....	2
11	PAFZZ	5305-00-724-7222	80204	B1821BH063C200N	. SCREW,CAP,HEXAGON H 5/8-11 X 2.0" UOC: SKB	4
12	PFFZZ	2530-01-499-3718	3DGR3	01546002	. BRAKE SHOE FRONT, SCISSOR SHOE	2
13	PFFZZ	5340-01-499-5543	3DGR3	02302044	. PLATE,MOUNTING.....	4
14	PFFZZ	5315-01-499-5545	3DGR3	01578006	. PIN,STRAIGHT,HEADED.....	4
15	PFFZZ	4010-01-499-7594	3DGR3	50450016	. WIRE ROPE ASSEMBLY,.....	4
16	PFFZZ	5320-01-499-5546	3DGR3	52050001	. RIVET,BLIND.....	4
17	PFFZZ	2530-01-499-5547	3DGR3	01546003	. BRAKE SHOE REAR, SCISSOR SHOE...	2
18	PAFZZ	5310-01-499-3318	3DGR3	02976010	. WASHER,FLAT.....	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
19	PFFZZ	5315-01-499-4271	3DGR3	51182002	. PIN,RETAINING.....	4
20	PAFZZ	5310-01-499-4273	3DGR3	50995065	. NUT,SELF-LOCKING,HE UOC: SKB	4
21	PAFZZ	5310-01-499-4273	3DGR3	50995065	. NUT,SELF-LOCKING,HE.....	20
22	PAFZZ	5305-01-499-4202	3DGR3	50174006	. SCREW,CAP,HEXAGON H 5/8-11 X 1.50".....	20
23	PAFZZ	5310-00-225-6993	81349	M45913/1-8CG5C	NUT,SELF-LOCKING,HE UOC: SCB,SJB	8
24	PAFZZ	5310-00-809-5997	96906	MS27183-17	WASHER,FLAT UOC: SCB,SJB	16
25	PFFZZ	2590-01-556-1200	3DGR3	10687100	BRACKET,VEHICULAR C FRONT, SUPPORT UOC: SJB	2
25	PFFZZ	2590-01-556-1276	3DGR3	10687102	BRACKET,VEHICULAR C FRONT, SUPPORT UOC: SCB	2
26	PAFZZ	5305-00-071-2069	80204	B1821BH050C150N	SCREW,CAP,HEXAGON H 1/2-13x1.50" UOC: SCB,SJB	8
27	PFFZZ	2590-01-556-1346	3DGR3	10687101	BRACKET,VEHICULAR C REAR, SUPPORT UOC: SJB	2
27	PFFZZ	2590-01-556-1440	3DGR3	10687103	BRACKET,VEHICULAR C REAR, SUPPORT UOC: SCB	2

END OF FIGURE

FIELD MAINTENANCE
GROUND BOARD ASSEMBLY

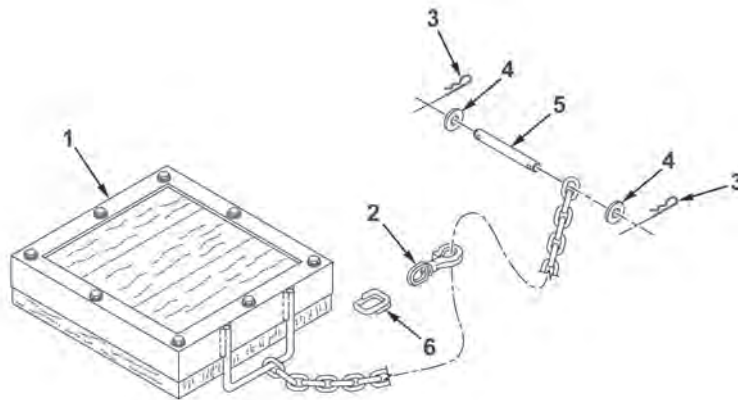


Figure 24. Ground Board Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1507 LANDING GEAR, LEVELING JACKS (MECHANICAL OR HYDRAULIC)						
FIG. 24. GROUND BOARD ASSEMBLY.						
1	PFFZZ	2510-01-499-4251	3DGR3	07758002	BOARD GROUND JACK 18" X 18".....	2
2	PFFZZ	4030-01-499-4227	3DGR3	50462035	SHACKLE.....	4
3	PFFZZ	5315-01-499-4271	3DGR3	51182002	PIN,RETAINING.....	4
4	PFFZZ	5310-01-499-3318	3DGR3	02976010	WASHER,FLAT.....	4
5	PFFZZ	5315-01-499-3472	3DGR3	08796002	PIN,STRAIGHT,HEADLE.....	2
6	PFFZZ	5340-01-499-5549	39428	3919T15	CLIP,SPRING TENSION.....	4

END OF FIGURE

FIELD MAINTENANCE
SUSPENSION

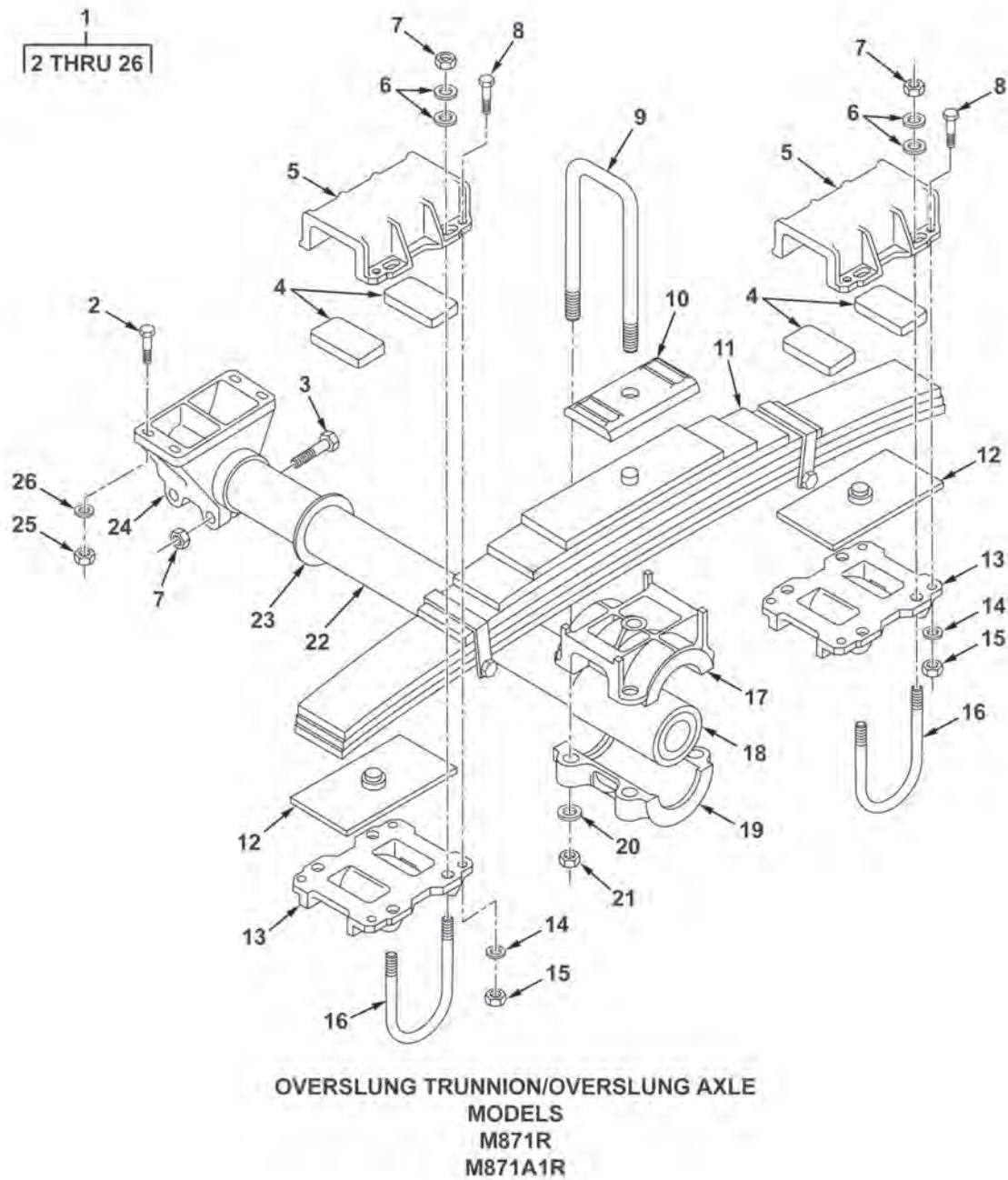


Figure 25. Suspension. (Sheet 1 of 2)

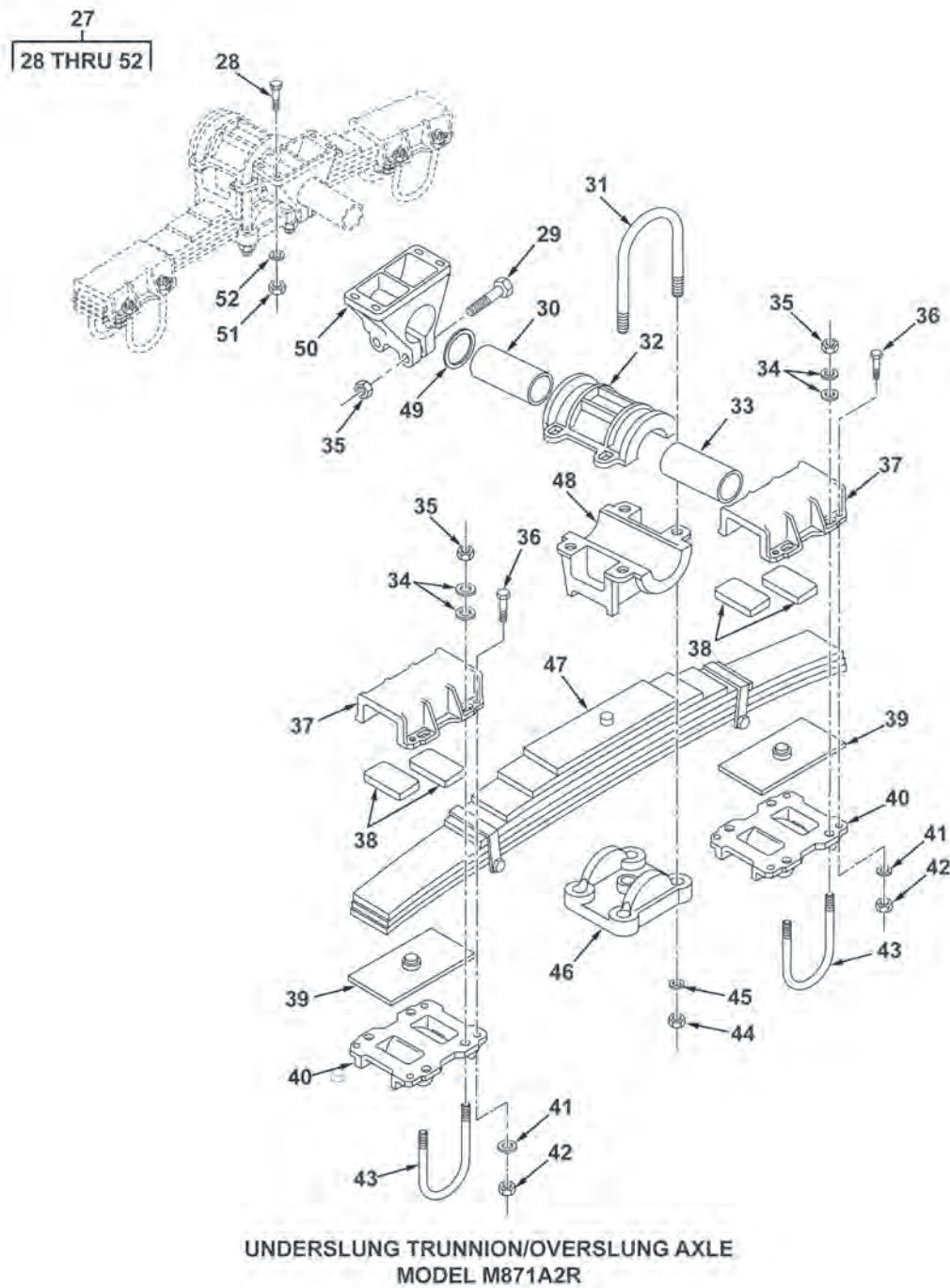


Figure 25. Suspension. (Sheet 2 of 2)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1601 SPRINGS						
FIG. 25. SUSPENSION.						
1	XDFFF		3DGR3	61000008	SUSPENSION ASSEMBLY COMPLETE MINUS AXLE UOC: SCB,SJB	2
2	PAFZZ	5305-01-499-4217	3DGR3	50174017	. SCREW,CAP,HEXAGON H UOC: SCB,SJB	4
3	PAFZZ	5306-01-347-5921	92967	10376-00	. BOLT,MACHINE UOC: SCB,SJB	2
4	PFFZZ	2590-01-100-9001	19207	12315354	. PAD,CUSHIONING UOC: SCB,SJB	4
5	PFFZZ	2510-01-100-7167	92967	9937-00	. END CAP,SPRING UOC: SCB,SJB	2
6	PAFZZ	5310-01-098-7245	92967	817-00	. WASHER,FLAT UOC: SCB,SJB	16
7	PAFZZ	5310-01-098-7827	92967	841-00	. NUT,SELF-LOCKING,HE UOC: SCB,SJB	10
8	PAFZZ	5305-00-726-2551	80204	B1821BH063F200N	. SCREW,CAP,HEXAGON H UOC: SCB,SJB	8
9	PFFZZ	5306-01-098-7198	92967	9639-03	. BOLT,U UOC: SCB,SJB	2
10	PFFZZ	2510-01-101-2559	19207	12315610	. PLATE,WEAR,LEAF SPR UOC: SCB,SJB	1
11	PFFZZ	5360-01-499-4204	92967	10055-00	. SPRING,HELICAL,COMP 7 LEAF UOC: SCB,SJB	1
12	PFFZZ	2510-01-101-2890	92967	10608-00	. PLATE,ALIGNMENT,LEA UOC: SCB,SJB	2
13	PFFZZ	2510-01-100-9270	19207	12315564	. SEAT,LEAF SPRING UOC: SCB,SJB	2
14	PAFZZ	5310-01-098-7244	92967	10273-00	. WASHER,FLAT UOC: SCB,SJB	8
15	PAFZZ	5310-01-499-4209	92967	11513-03	. NUT,SELF-LOCKING,HE UOC: SCB,SJB	8
16	PFFZZ	5306-01-098-7197	92967	10060-01	. BOLT,U UOC: SCB,SJB	4
17	PFFZZ	2520-01-101-0935	92967	891-00	. HUB TRUNNION,UPPER UOC: SCB,SJB	1
18	PFFZZ	5365-01-316-3300	92967	23276-01	. BUSHING,NONMETALLIC UOC: SCB,SJB	1
19	PFFZZ	2520-01-101-2551	97220	338-426	. TRUNNION,HUB,LOWER UOC: SCB,SJB	1
20	PAFZZ	5310-01-098-7246	92967	837-00	. WASHER,FLAT UOC: SCB,SJB	4
21	PAFZZ	5310-01-098-7236	19207	12315614	. NUT,PLAIN,HEXAGON UOC: SCB,SJB	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
22	PFFZZ	4710-01-240-9431	92967	B893-02	. TUBE,METALLIC UOC: SCB,SJB	1
23	PAFZZ	5310-01-098-7247	92967	895-00	. WASHER,FLAT UOC: SCB,SJB	1
24	PAFZZ	5340-01-407-2311	92967	10476-01	. BRACKET,MOUNTING UOC: SCB,SJB	1
25	PAFZZ	5310-01-499-4273	3DGR3	50995065	. NUT,SELF-LOCKING,HE UOC: SCB,SJB	4
26	PAFZZ	5310-01-499-4211	3DGR3	55752009	. WASHER,FLAT UOC: SCB,SJB	4
27	XDFFF		3DGR3	61000008	SUSPENSION ASSEMBLY COMPLETE MINUS AXLE UOC: SKB	2
28	PAFZZ	5305-01-499-4217	3DGR3	50174017	. SCREW,CAP,HEXAGON H UOC: SKB	4
29	PAFZZ	5306-01-347-5921	92967	10376-00	. BOLT,MACHINE UOC: SKB	2
30	PFFZZ	4710-01-240-9431	92967	B893-02	. TUBE,METALLIC UOC: SKB	1
31	PFFZZ	5306-01-593-9779	06YZ5	835-02	. BOLT,U UOC: SKB	2
32	PFFZZ	2520-01-101-0935	92967	891-00	. HUB TRUNNION,UPPER UOC: SKB	1
33	PFFZZ	5365-01-316-3300	92967	23276-01	. BUSHING,NONMETALLIC UOC: SKB	1
34	PAFZZ	5310-01-098-7245	92967	817-00	. WASHER,FLAT UOC: SKB	16
35	PAFZZ	5310-01-098-7827	92967	841-00	. NUT,SELF-LOCKING,HE UOC: SKB	10
36	PAFZZ	5305-00-726-2551	80204	B1821BH063F200N	. SCREW,CAP,HEXAGON H UOC: SKB	8
37	PFFZZ	2510-01-100-7167	92967	9937-00	. END CAP,SPRING UOC: SKB	2
38	PFFZZ	2590-01-100-9001	19207	12315354	. PAD,CUSHIONING UOC: SKB	4
39	PFFZZ	2510-01-101-2890	92967	10608-00	. PLATE,ALIGNMENT,LEA UOC: SKB	2
40	PFFZZ	2510-01-100-9270	19207	12315564	. SEAT,LEAF SPRING UOC: SKB	2
41	PAFZZ	5310-01-098-7244	92967	10273-00	. WASHER,FLAT UOC: SKB	8
42	PAFZZ	5310-01-499-4209	92967	11513-03	. NUT,SELF-LOCKING,HE UOC: SKB	8
43	PFFZZ	5306-01-098-7197	92967	10060-01	. BOLT,U UOC: SKB	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
44	PAFZZ	5310-01-098-7236	19207	12315614	. NUT,PLAIN,HEXAGON UOC: SKB	4
45	PAFZZ	5310-01-098-7246	92967	837-00	. WASHER,FLAT UOC: SKB	4
46	PFFZZ	2510-01-101-2559	19207	12315610	. PLATE,WEAR,LEAF SPR UOC: SKB	1
47	PFFZZ	5360-01-499-4204	92967	10055-00	. SPRING,HELICAL,COMP 7 LEAF UOC: SKB	1
48	PFFZZ	2520-01-101-2551	97220	338-426	. TRUNNION,HUB,LOWER UOC: SKB	1
49	PAFZZ	5310-01-098-7247	92967	895-00	. WASHER,FLAT UOC: SKB	1
50	PAFZZ	5340-01-407-2311	92967	10476-01	. BRACKET,MOUNTING UOC: SKB	1
51	PAFZZ	5310-01-499-4273	3DGR3	50995065	. NUT,SELF-LOCKING,HE UOC: SKB	4
52	PAFZZ	5310-01-499-4211	3DGR3	55752009	. WASHER,FLAT UOC: SKB	4

END OF FIGURE

**FIELD MAINTENANCE
BULKHEAD AND STOWAGE RACK ASSEMBLY**

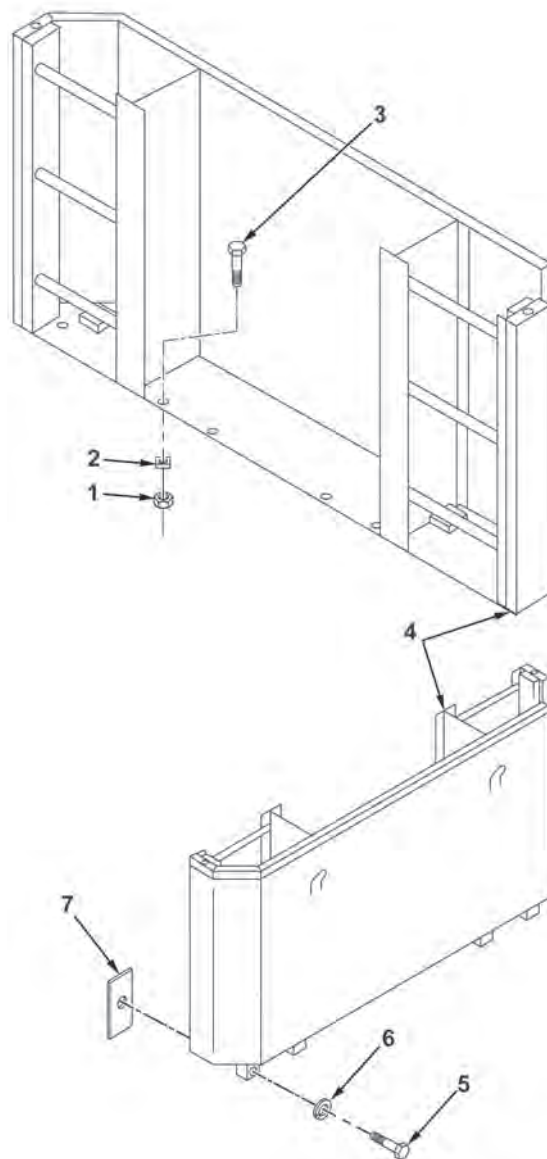
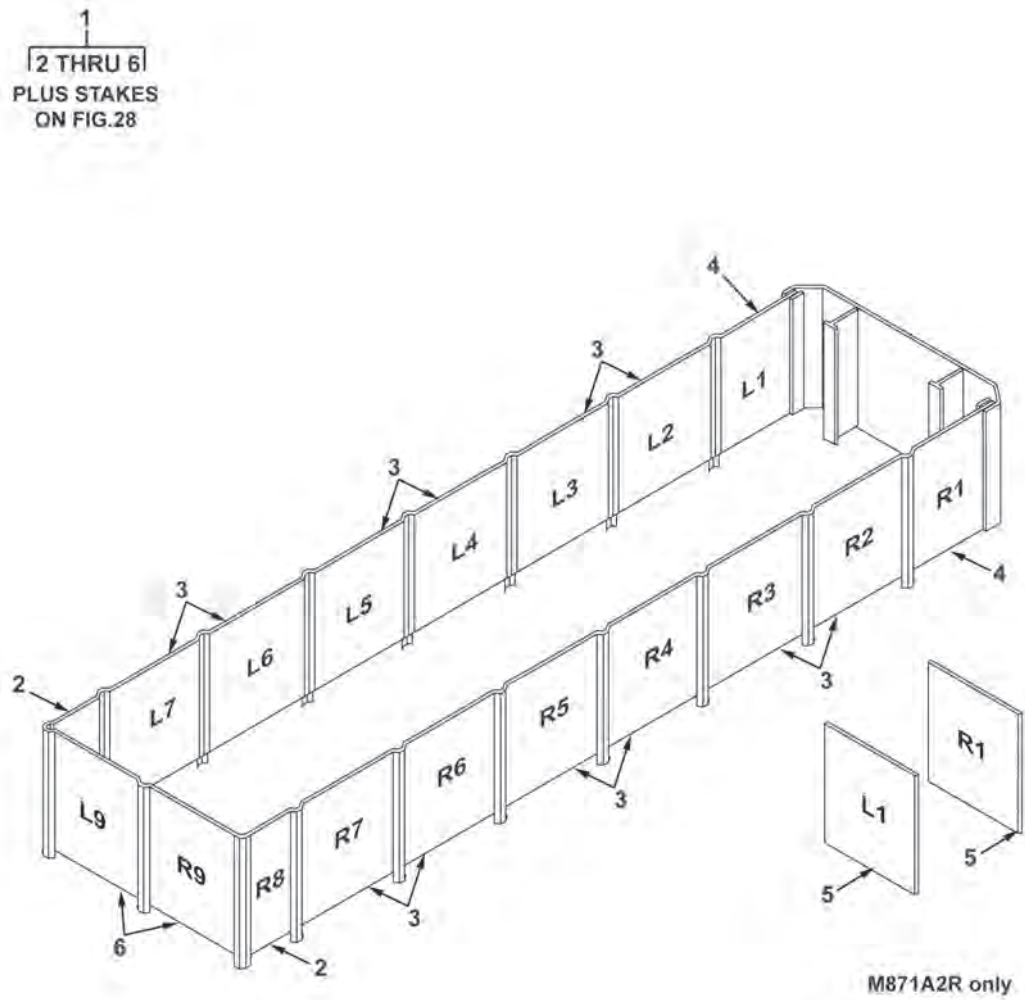


Figure 26. Bulkhead and Stowage Rack Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1801 BODY, CAB, HOOD, AND HULL ASSEMBLIES						
FIG. 26. BULKHEAD AND STOWAGE RACK ASSEMBLY.						
1	PAFZZ	5310-00-061-4651	81349	M45913/1-10CG8C	NUT,SELF-LOCKING,HE 5/8-11".....	4
2	PAFZZ	5310-01-556-2138	3DGR3	02321502	WASHER,FLAT 1.5 X 2.0 X 0.25" THK.....	4
3	PAFZZ	5305-00-724-7222	80204	B1821BH063C200N	SCREW,CAP,HEXAGON H 5/8-11 X 2.00"	4
4	PFFZZ	2510-01-556-1279	3DGR3	61000004	PANEL,BODY,VEHICULA.....	1
5	PAFZZ	5305-00-071-2069	80204	B1821BH050C150N	SCREW,CAP,HEXAGON H 1/2-13x1.50"...	4
6	PAFZZ	5310-00-584-5272	80205	MS35338-48	WASHER,LOCK 1/2".....	4
7	PFFZZ	2990-01-597-8906	3DGR3	05472019	PLATE,MOUNTING,ENGI 1.5 X 5.0 X 0.25" THK WITH WELDED NUT.....	4

END OF FIGURE

**FIELD MAINTENANCE
SIDE AND REAR BOARDS**



See Fig.28 for Stakes

Figure 27. Side and Rear Boards.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1801 BODY, CAB, HOOD, AND HULL ASSEMBLIES						
FIG. 27. SIDE AND REAR BOARDS.						
1	PFFZZ	2510-01-556-1448	3DGR3	61000051	STAKE,VEHICLE BODY INCLUDES ALL SIDEBOARDS AND STAKES.....	1
2	PFFZZ	2510-01-556-1938	3DGR3	04694014	. SIDE RACK,VEHICLE B 23.75 X 48", SIDE REAR.....	2
3	PFFZZ	5530-01-499-3391	3DGR3	04694006	. PLYWOOD,CONSTRUCTIO 47 3/4 X 48", SIDES.....	12
4	PFFZZ	5530-01-499-3386	3DGR3	04694005	. PLYWOOD,CONSTRUCTIO 35.75 X 48", SIDE FRONT UOC: SCB,SJB	2
5	PFFZZ	2510-01-556-1934	3DGR3	04694015	. SIDE RACK,VEHICLE B 42 X 48", SIDE FRONT UOC: SKB	2
6	PFFZZ	2510-01-556-1274	0FBD6	04694012	. FRAME SECTION,STRUC 44 X 48", REAR.....	2

END OF FIGURE

**FIELD MAINTENANCE
FRONT, SIDE, AND REAR STAKES**

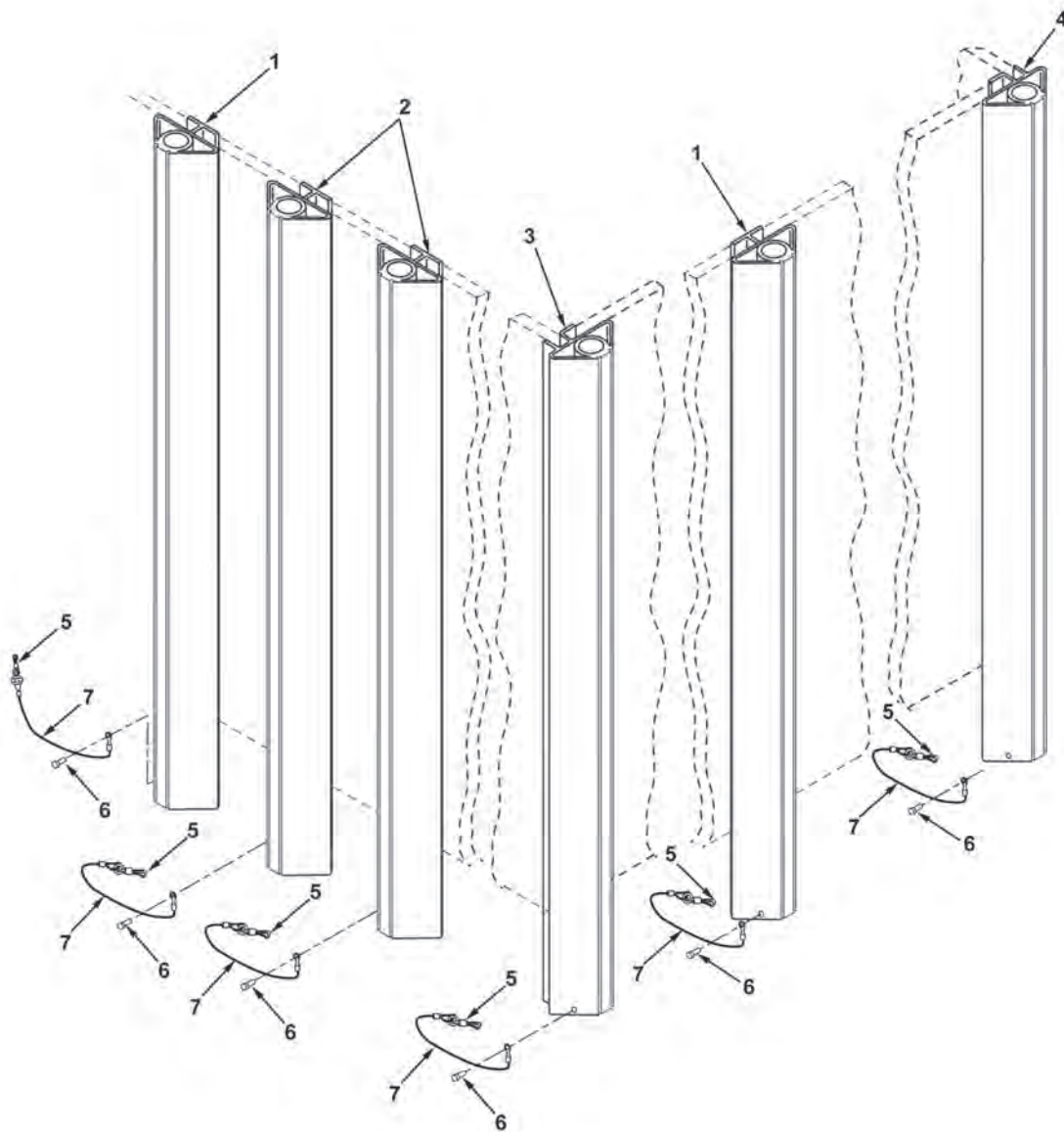


Figure 28. Front, Side, and Rear Stakes.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1801 BODY, CAB, HOOD, AND HULL ASSEMBLIES						
FIG. 28. FRONT, SIDE, AND REAR STAKES.						
1	PFFZZ	2510-01-499-7638	3DGR3	04696003	STAKE,VEHICLE BODY REAR CENTER AND SIDES.....	11
2	PFFZZ	2510-01-499-3799	3DGR3	04696001	STAKE,VEHICLE BODY CROSS CHAIN STAKES.....	4
3	PFFZZ	2510-01-499-7636	3DGR3	04696002	STAKE,VEHICLE BODY LEFT REAR CORNER.....	1
4	PFFZZ	2510-01-556-1390	3DGR3	04696005	STAKE,VEHICLE BODY RIGHT REAR CORNER.....	1
5	PFFZZ	5340-01-499-4157	0FBD6	50462030	SNAP HOOK.....	17
6	PFFZZ	5320-01-499-5546	3DGR3	52050001	RIVET,BLIND.....	17
7	PFFZZ	4010-01-499-7594	3DGR3	50450016	WIRE ROPE ASSEMBLY,.....	17

END OF FIGURE

FIELD MAINTENANCE
MUD FLAPS

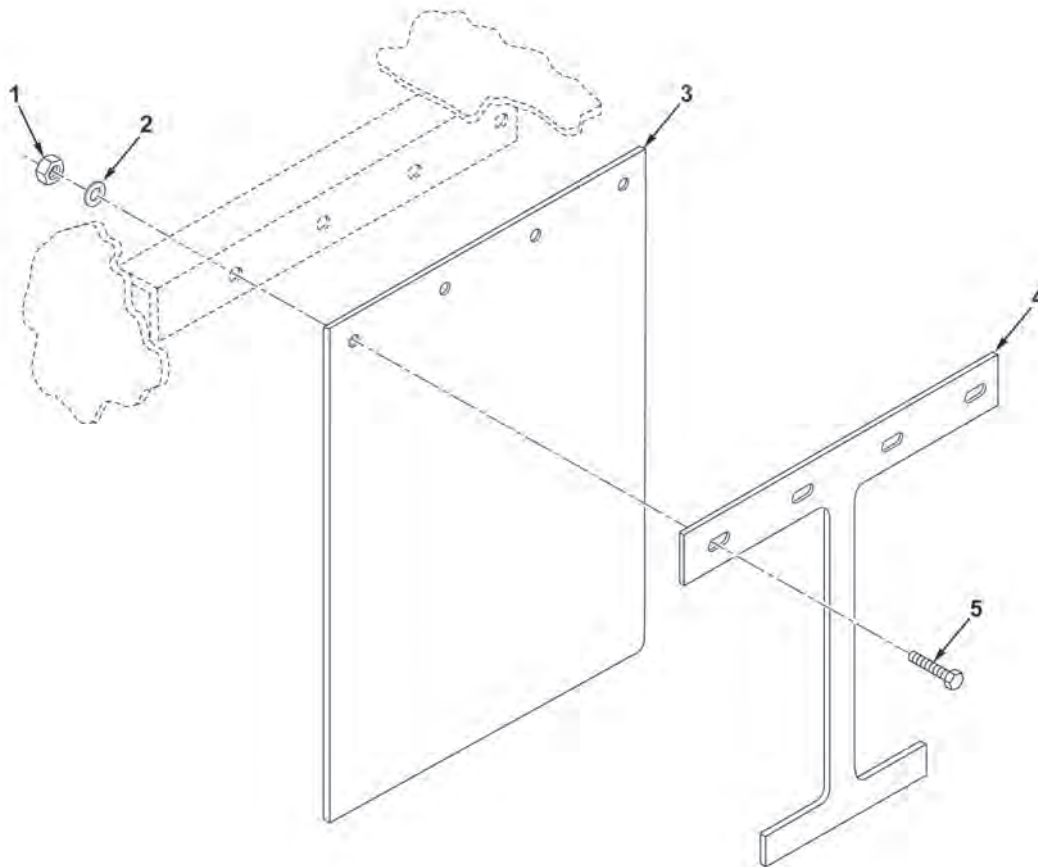
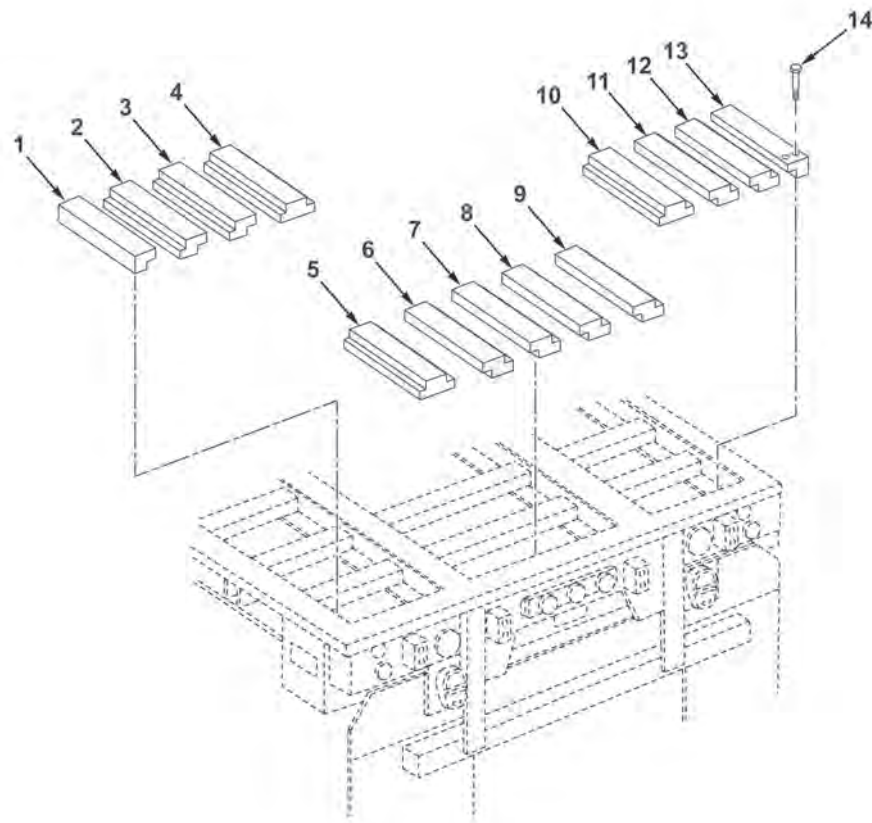


Figure 29. Mud Flaps.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1801 BODY, CAB, HOOD, AND HULL ASSEMBLIES						
FIG. 29. MUD FLAPS.						
1	PAFZZ	5310-01-499-3456	3DGR3	50995054	NUT,SELF-LOCKING,HE.....	8
2	PAFZZ	5310-01-499-3461	3DGR3	55752005	WASHER,FLAT.....	8
3	PFFZZ	2540-01-499-4246	3DGR3	50822014	GUARD,SPLASH,VEHICU 24" X 36".....	2
4	PFFZZ	5340-01-499-3409	3DGR3	07430072	BRACKET,MOUNTING.....	2
5	PAFZZ	5305-01-499-3465	3DGR3	50172008	SCREW,CAP,HEXAGON H.....	8

END OF FIGURE

FIELD MAINTENANCE
FLOOR DECKING



MODELS M871R & M871A1R

Figure 30. Floor Decking. (Sheet 1 of 3)

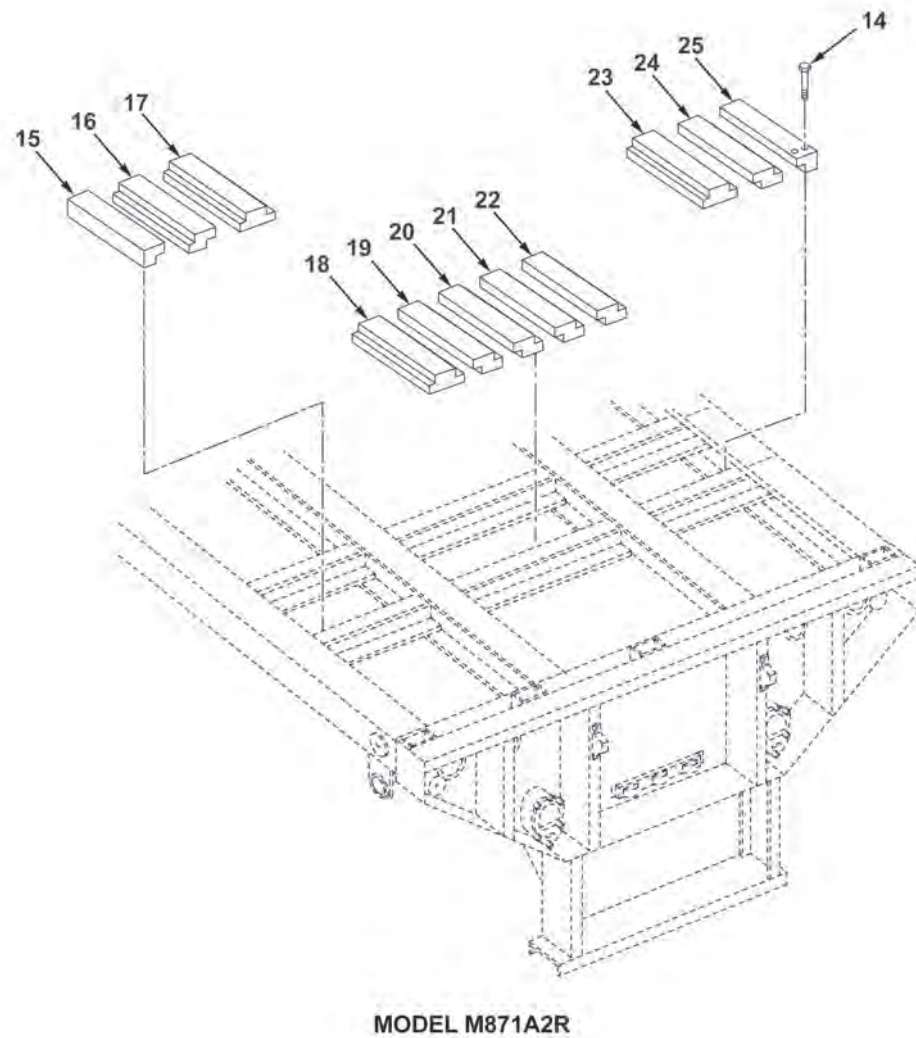


Figure 30. Floor Decking. (Sheet 2 of 3)

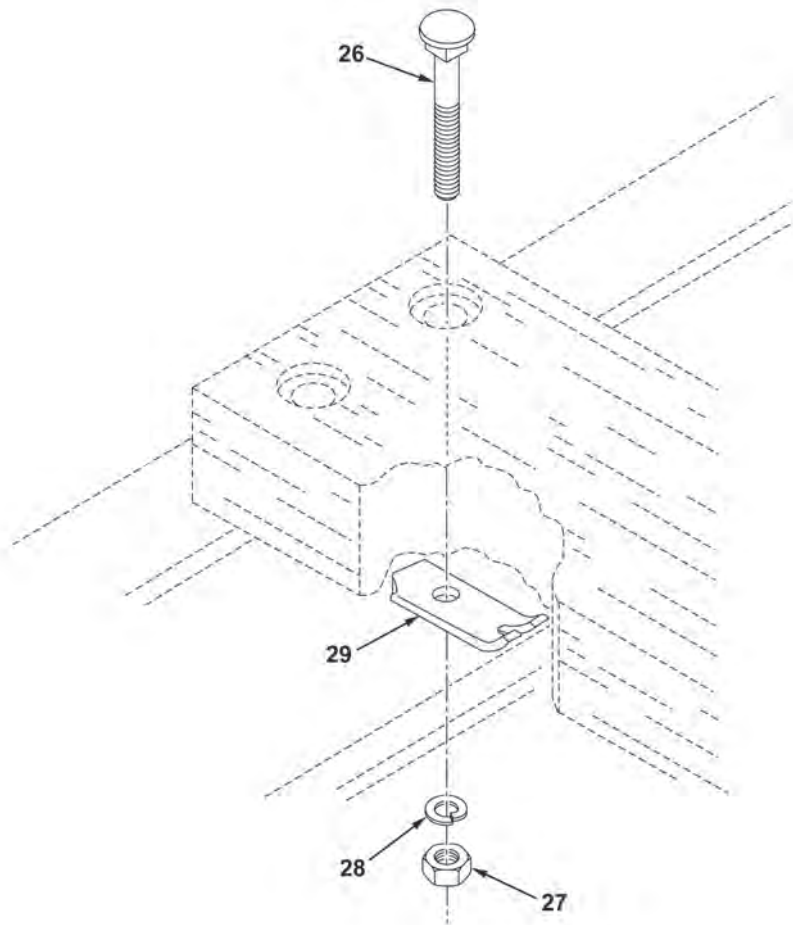


Figure 30. Floor Decking. (Sheet 3 of 3)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1805 FLOORS, SUB-FLOORS, AND RELATED COMPONENTS						
FIG. 30. FLOOR DECKING.						
1	PFFZZ	5510-01-556-1819	8N013	M871-A1-A	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
2	PFFZZ	5510-01-558-8143	8N013	M871-A1-B	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
3	PFFZZ	5510-01-558-8767	8N013	M871-A1-C	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
4	PFFZZ	5510-01-559-0836	8N013	M871-A1-D	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
5	PFFZZ	5510-01-558-9542	8N013	M871-A1-E	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
6	PFFZZ	5510-01-558-8397	8N013	M871-A1-F	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
7	PFFZZ	5510-01-558-8545	8N013	M871-A1-G	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
8	PFFZZ	5510-01-559-0830	8N013	M871-A1-H	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
9	PFFZZ	5510-01-558-9549	8N013	M871-A1-J	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
10	PFFZZ	5510-01-558-8144	8N013	M871-A1-K	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
11	PFFZZ	5510-01-558-8572	8N013	M871-A1-L	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
12	PFFZZ	5510-01-558-8489	8N013	M871-A1-M	WOOD LAMINATE,DECKI PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
13	PFFZZ	5510-01-559-0847	8N013	M871-A1-N	LUMBER,HARDWOOD PART OF KIT P/N M871-A1-KIT UOC: SCB,SJB	1
14	PAFZZ	5305-01-499-7657	3DGR3	52116040	SCREW,MACHINE.....	326
15	PFFZZ	2510-01-521-4248	8N013	M871A2-A	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
16	PFFZZ	2510-01-521-4252	8N013	M871A2-B	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
17	PFFZZ	2510-01-521-4255	8N013	M871A2-C	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
18	PFFZZ	2510-01-521-4213	8N013	M871A2-D	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
19	PFFZZ	2510-01-521-4217	8N013	M871A2-E	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
20	PFFZZ	2510-01-521-4228	8N013	M871A2-F	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
21	PFFZZ	2510-01-521-4230	8N013	M871A2-G	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
22	PFFZZ	2510-01-521-4399	8N013	M871A2-H	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
23	PFFZZ	2510-01-521-4232	8N013	M871A2-J	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
24	PFFZZ	2510-01-521-4245	8N013	M871A2-K	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
25	PFFZZ	2510-01-521-4208	8N013	M871A2-L	FLOOR,BODY,VEHICULA PART OF KIT P/N M871A2-KIT UOC: SKB 1	1
26	PAFZZ	5306-00-993-6257	80205	MS35751-77	BOLT,SQUARE NECK.....	200
27	PAFZZ	5310-00-761-0654	96906	MS51967-9	NUT,PLAIN,HEXAGON.....	200
28	PAFZZ	5310-01-334-4710	80205	MS35338-46	WASHER,LOCK.....	200
29	PAFZZ	5340-01-325-2249	26697	MP0-0919-C	PLATE,MOUNTING.....	200

END OF FIGURE

FIELD MAINTENANCE
STOWAGE BOX

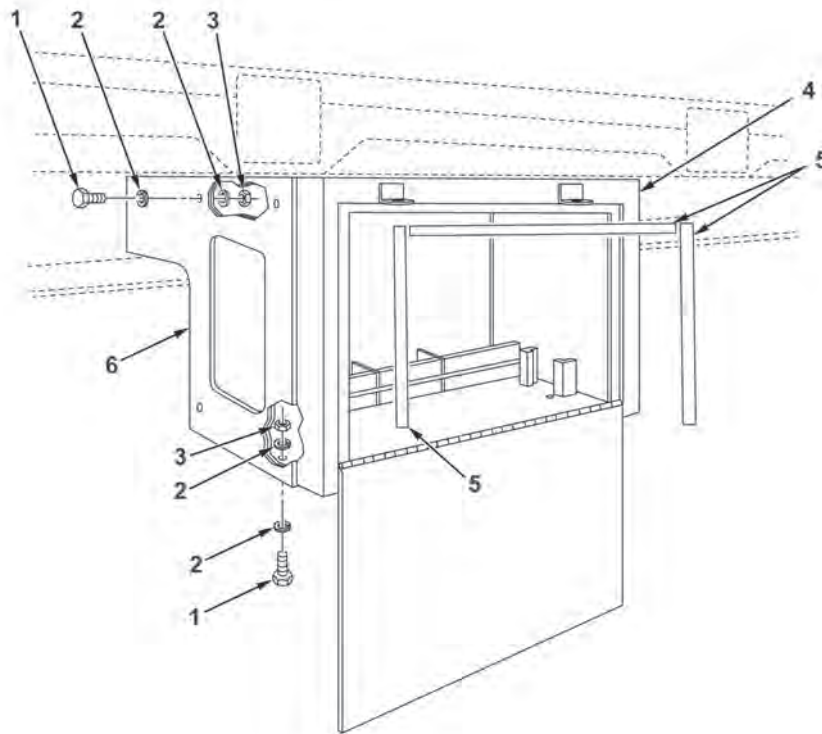


Figure 31. Stowage Box.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1808 STOWAGE RACKS, BOXES, STRAPS, CARRYING CASES, CABLE REELS, HOSE REELS, ETC.						
FIG. 31. STOWAGE BOX.						
1	PAFZZ	5305-01-499-7665	3DGR3	50173008	SCREW,CAP,HEXAGON H.....	8
2	PAFZZ	5310-01-499-3687	3DGR3	55752007	WASHER,FLAT.....	16
3	PAFZZ	5310-01-499-3682	3DGR3	50995056	NUT,SELF-LOCKING,HE.....	8
4	PFFFF	2540-01-499-3425	3DGR3	00166005	BOX,ACCESSORIES STO.....	1
5	PFFZZ	5330-01-556-1405	3DGR3	52600090	SEAL,NONMETALLIC ST CUT TO FIT, (9 FT).....	1
6	PFFZZ	2590-01-556-1273	3DGR3	00028263	BRACKET,VEHICULAR C LH, WELDMENT UOC: SKB	1
6	PFFZZ	2590-01-556-1385	3DGR3	00028264	BRACKET,VEHICULAR C RH, WELDMENT UOC: SKB	1

END OF FIGURE

FIELD MAINTENANCE
MANIFEST BOX

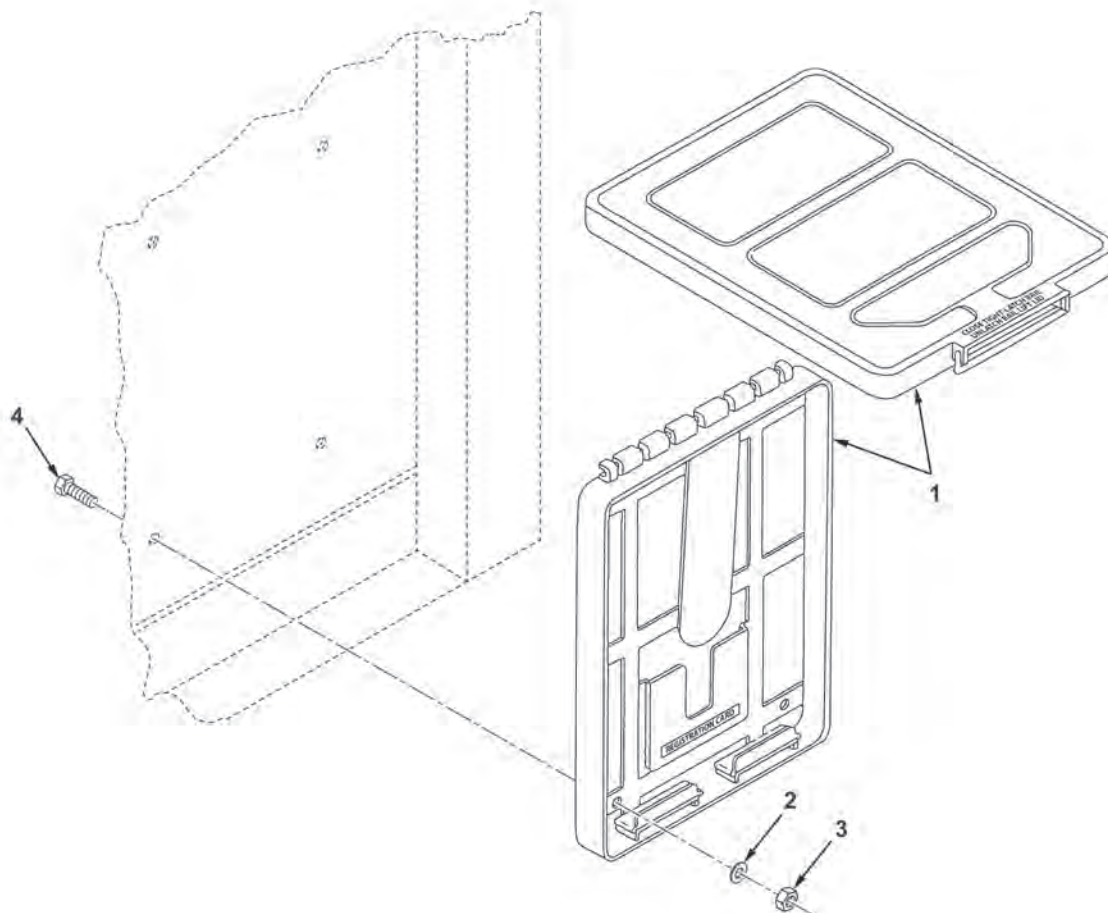


Figure 32. Manifest Box.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 1808 STOWAGE RACKS, BOXES, STRAPS, CARRYING CASES, CABLE REELS, HOSE REELS, ETC.	
					FIG. 32. MANIFEST BOX.	
1	XDFZZ		1JA34	550	BOX,FILING.....	1
2	PAFZZ	5310-01-504-6159	3DGR3	55752003	WASHER,FLAT 0.25 Z/PLATED.....	4
3	PAFZZ	5310-01-499-4253	3DGR3	50995050	NUT,SELF-LOCKING,HE 0.25-20 NLN/INSERT.....	4
4	PAFZZ	5305-01-499-4256	3DGR3	50170005	SCREW,CAP,HEXAGON H 0.25-20 X 1"...	4

END OF FIGURE

FIELD MAINTENANCE
RUBBER DOCK BUMPERS

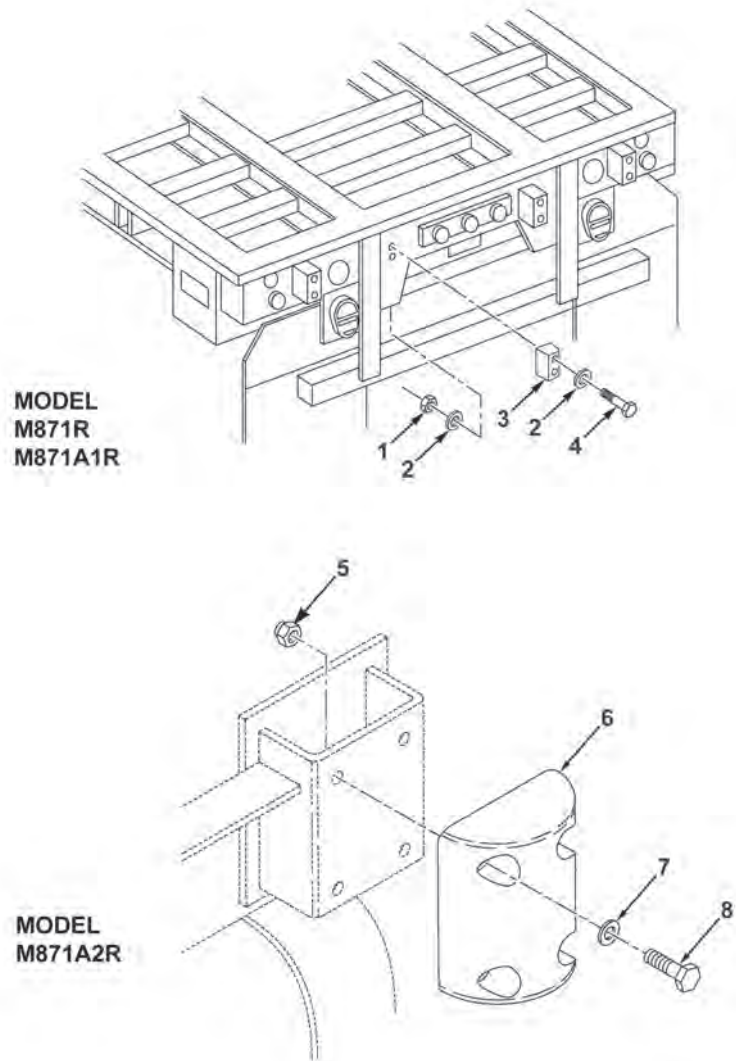


Figure 33. Rubber Dock Bumpers.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 2101 BUMPERS, BRACKETS, GUARDS, AND PROTECTIVE DEVICES						
FIG. 33. RUBBER DOCK BUMPERS.						
1	PAFZZ	5310-00-269-4040	81349	M45913/1-10CG5C	NUT,SELF-LOCKING,HE UOC: SCB	8
1	PAFZZ	5310-00-763-8920	96906	MS51967-20	NUT,PLAIN,HEXAGON UOC: SJB	8
2	PAFZZ	5310-00-823-8803	96906	MS27183-21	WASHER,FLAT UOC: SCB,SJB	16
3	PAFZZ	5340-01-112-6396	83473	TB-20	BUMPER UOC: SJB	4
3	PAFZZ	5340-01-264-1579	66788	SL1000	BUMPER UOC: SCB	4
4	PAFZZ	5305-00-724-6761	80205	MS90725-167	SCREW,CAP,HEXAGON H UOC: SCB,SJB	8
5	PAFZZ	5310-00-488-3889	81349	M45913/3-8CG8C	NUT,SELF-LOCKING,HE UOC: SKB	8
6	PFFZZ	5340-01-317-9251	6T589	RC71-68	BUMPER UOC: SKB	2
7	PAFZZ	5310-00-809-5997	96906	MS27183-17	WASHER,FLAT UOC: SKB	8
8	PAFZZ	5305-00-071-2073	80204	B1821BH050C250N	SCREW,CAP,HEXAGON H UOC: SKB	8
END OF FIGURE						

FIELD MAINTENANCE
REFLECTORS

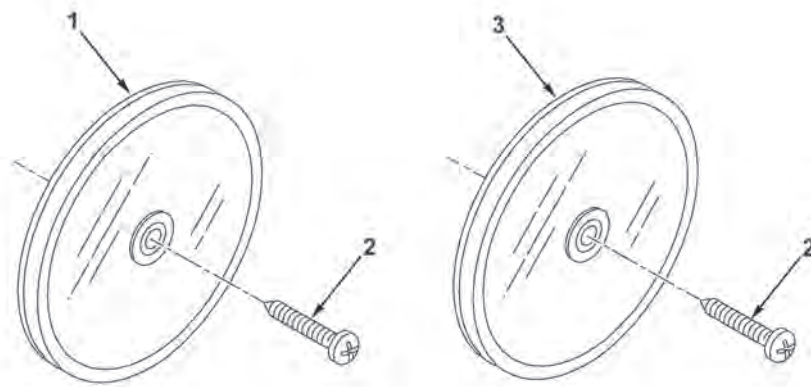


Figure 34. Reflectors.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
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GROUP 2202 ACCESSORY ITEMS**FIG. 34. REFLECTORS.**

1	PAFZZ	9905-01-352-7999	13548	98006Y	REFLECTOR,INDICATIN YELLOW.....	4
2	PFFZZ	5305-01-499-5551	3DGR3	52100010	SCREW,TAPPING 0.25 X 0.70".....	8
3	PAFZZ	9905-01-343-1011	13548	98006R	REFLECTOR,INDICATIN RED.....	4

END OF FIGURE

FIELD MAINTENANCE
REFLECTIVE TAPE

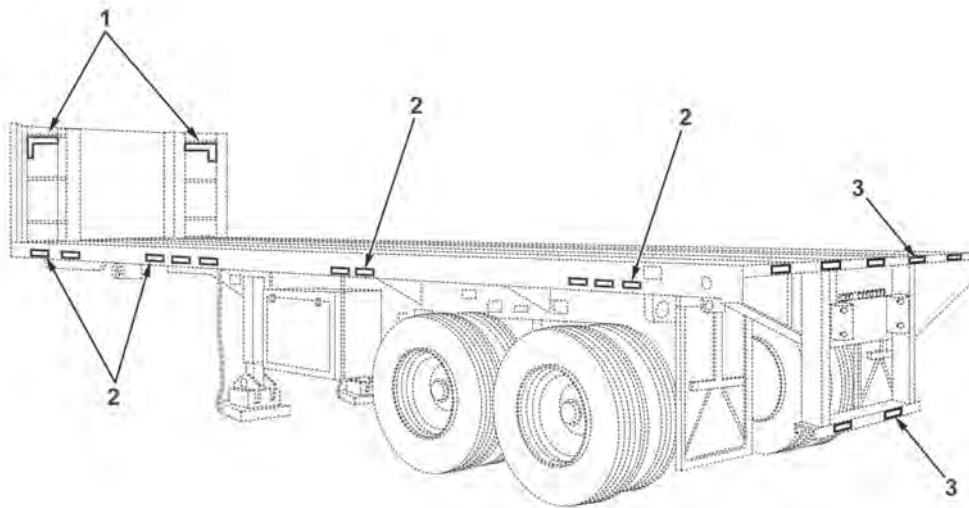


Figure 35. Reflective Tape.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 2202 ACCESSORY ITEMS						
FIG. 35. REFLECTIVE TAPE.						
1	MFFZZ		13548	98100-AR	TAPE, REFLECTIVE MAKE FROM TAPE P/N 51457017, CUT TO FIT, WHITE..	2
2	MFFZZ		13548	98101-AR	TAPE, REFLECTIVE MAKE FROM TAPE P/N 98101, CUT TO FIT, RED/ WHITE.....	8
3	MFFZZ		13548	98107-AR	TAPE, REFLECTIVE MAKE FROM TAPE P/N 98107, CUT TO FIT, RED/ WHITE.....	2

END OF FIGURE

FIELD MAINTENANCE DATA PLATES

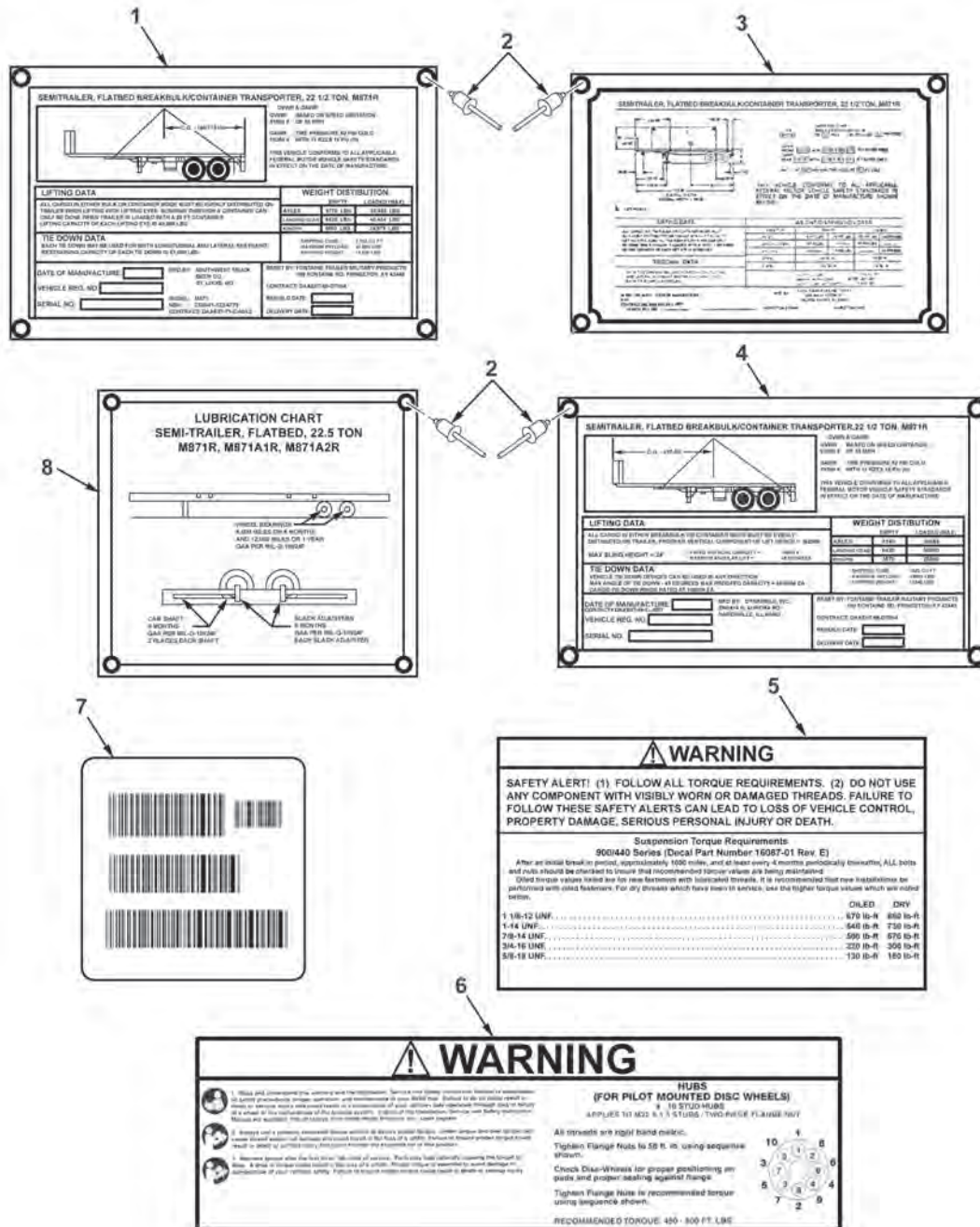


Figure 36. Data Plates. (Sheet 1 of 2)

9

GROSS AXLE WEIGHT RATING = 20,000 LBS. PER AXLE
GROSS AXLE WEIGHT RATING = 40,000 LBS. BOTH AXLES

10

NOTICE

This trailer is equipped with automatic slack adjusters. Consult maintenance manual before adjusting.

12

TO WRITE ON THIS LABEL USE AN INDELIBLE, PERMANENT INK MARKER, PEN OR PENCIL THAT WILL NOT FADE IN DIRECT SUNLIGHT

ANNUAL VEHICLE INSPECTION LABEL

COMPLETED: MONTH _____ YEAR _____

A RECORD OF THIS VEHICLE'S ANNUAL VEHICLE INSPECTION REPORT IS MAINTAINED AT: ☐ MOTOR CARRIER ☐ OTHER ENTITY

COMPANY (NAME)

STREET ADDRESS

CITY, STATE, ZIP CODE

TELEPHONE

MOTOR CARRIER IDENTIFICATION NUMBER

CERTIFICATION: THIS VEHICLE HAS PASSED AN INSPECTION IN ACCORDANCE WITH 49CFR 396.17 THROUGH 396.23

VEHICLE IDENTIFICATION: IF THE VEHICLE IS NOT READILY, CLEARLY, AND PERMANENTLY MARKED, CHECK ONE AND COMPLETE

☐ FLEET UNIT NUMBER ☐ LICENSE / REGISTRATION NUMBER

☐ VEHICLE IDENTIFICATION NUMBER ☐ OTHER _____

50007900

11

FINAL INSPECTION COMPLETE

SERIAL# _____

DATE _____

INSPECTOR _____

TRAILER COMPANY _____

RE5037-2

Figure 36. Data Plates. (Sheet 2 of 2)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 2210 DATA PLATES AND INSTRUCTION HOLDERS						
FIG. 36. DATA PLATES.						
1	PFFZZ	7690-01-556-3420	0FBD6	50976054	MARKER,IDENTIFICATI UOC: SJB	1
2	PFFZZ	5320-00-850-3282	81349	M24243/1-A408	RIVET,BLIND.....	16
3	PFFZZ	7690-01-556-3415	0FBD6	50976055	MARKER,IDENTIFICATI UOC: SCB	1
4	PFFZZ	7690-01-499-4258	3DGR3	50976051	MARKER,IDENTIFICATI TIE DOWN UOC: SKB	1
4	PFFZZ	7690-01-499-4257	3DGR3	50976003	MARKER,IDENTIFICATI UOC: SCB	1
5	PFFZZ	7690-01-499-3759	92967	16087-1	MARKER,IDENTIFICATI SUSPENSION TORQUE.....	1
6	PFFZZ	7690-01-556-2648	18889	SD002C	DECAL.....	1
7	PFFZZ	7690-01-556-4209	0FBD6	50976005	LABEL UID.....	2
8	XDFZZ		3DGR3	50976052	PLATE,INSTRUCTION LUBRICATION.....	1
9	PFFZZ	9905-01-557-2549	3DGR3	50506050	PLATE,INSTRUCTION AXLE GROSS WEIGHT.....	1
10	PFFZZ	9905-01-557-2550	3DGR3	50507065	PLATE,INSTRUCTION SLACK ADJUSTMENT.....	1
11	PFFZZ	7690-01-499-4261	3DGR3	50507096	MARKER,IDENTIFICATI.....	1
12	PFFZZ	7690-01-499-4259	3DGR3	50507098	MARKER,IDENTIFICATI ANNUAL INSPECTION.....	1

END OF FIGURE

FIELD MAINTENANCE
ABS WARNING LIGHT

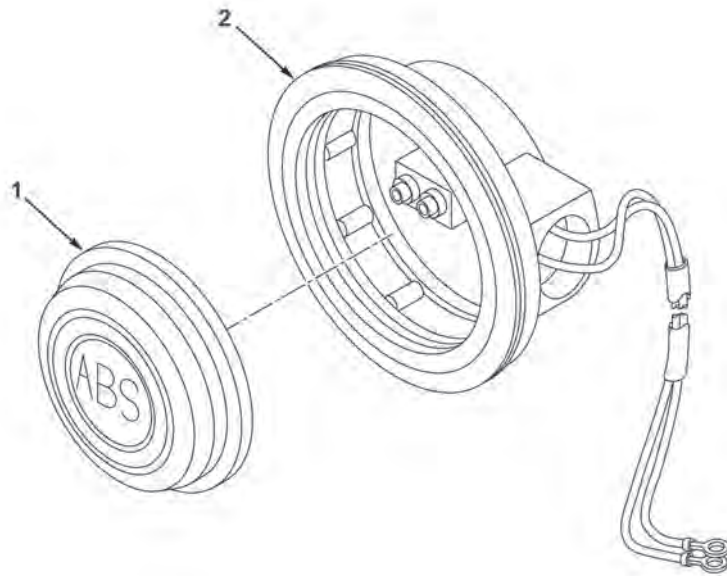


Figure 37. ABS Warning Light.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 4209 SIGNALING DEVICES						
FIG. 37. ABS WARNING LIGHT.						
1	PFFZZ	6240-01-499-4267	0MWU4	30257Y	LAMP, INCANDESCENT ABS LAMP.....	1
2	PFFZZ	5325-01-499-3619	3DGR3	50824014	GROMMET, NONMETALLIC.....	1

END OF FIGURE

FIELD MAINTENANCE
HUB MILEAGE METER

1
2

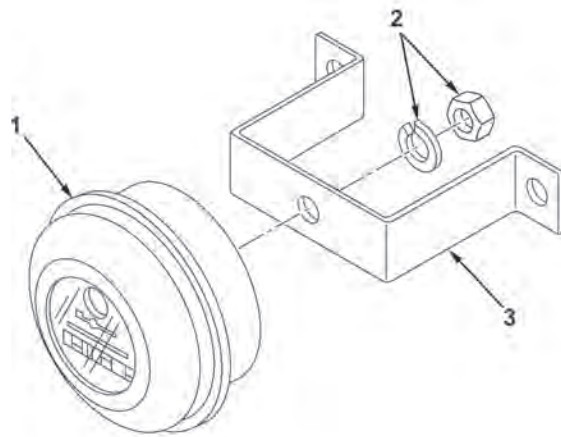


Figure 38. Hub Mileage Meter.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
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**GROUP 4701 INSTRUMENTS (SPEED
AND DISTANCE)**

FIG. 38. HUB MILEAGE METER.

1	PFFZZ	6680-01-556-2589	3DGR3	50886021	COUNTER,ROTATING.....	1
2	PFFZZ	5310-01-499-3654	26151	641-0004	. NUT,PLAIN,ASSEMBLED.....	1
3	PFFZZ	2590-01-450-0304	26151	610-0065	BRACKET,VEHICULAR C.....	1

END OF FIGURE

FIELD MAINTENANCE
REPAIR PARTS KITS

ILLUSTRATION NOT REQUIRED

Figure KITS. Repair Parts Kits.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 9401 REPAIR KITS						
FIG. KITS. REPAIR PARTS KITS.						
1	PFFZZ	2530-01-551-8601	78500	KIT8078	PARTS KIT,BRAKE ADJ PARTS FOR ONE END OF AXLE.....	1
					WASHER,RECESSED(002)	7-2
					GASKET (004)	7-3
					RETAINER,ARM (002)	7-4
					BUSHIN	
					SCREW,TAPPING (008)	7-5
					WASHER,FLAT (002)	7-6
					RING,RETAINING (002)	7-7
					PARTS KIT,BRAKE (001)	7-12
					ADJ	
					SCREW,TAPPING (004)	7-16
					WASHER,FLAT (002)	7-18
					RING,RETAINING (002)	7-19
2	PFFZA	2530-01-509-7685	78500	KSMA2124707QP	PARTS KIT,SHOE BRAK PARTS FOR ONE AXLE.....	1
					SHOE AND LINING (004)	8-1
					ASS	
					ROLLER,LINEAR- (004)	8-2
					ROTAR	
					RETAINER,SPECIAL (004)	8-3
					PIN,ANCHOR (004)	8-8
					SPRING,HELICAL,CO (002)	8-9
					MP	
					SPRING,HELICAL,EX (004)	8-10
					TE	
					PIN,SHOULDER,HEA (004)	8-11
					DLE	
					BUSHING,SLEEVE (004)	8-12

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
3	PFFZZ	2510-01-558-8153	8N013	M871-A1-KIT	PARTS KIT,FLOOR,VEH INCLUDES 13 BOARDS EA 19 FT. UOC: SCB,SJB 1	
					LUMBER,HARDWOOD (001)	30-1
					D	
					WOOD (001)	30-2
					LAMINATE,DECKI	
					WOOD (001)	30-3
					LAMINATE,DECKI	
					LUMBER,HARDWOOD (001)	30-4
					D	
					LUMBER,HARDWOOD (001)	30-5
					D	
					WOOD (001)	30-6
					LAMINATE,DECKI	
					WOOD (001)	30-7
					LAMINATE,DECKI	
					LUMBER,HARDWOOD (001)	30-8
					D	
					LUMBER,HARDWOOD (001)	30-9
					D	
					LUMBER,HARDWOOD (001)	30-10
					D	
					WOOD (001)	30-11
					LAMINATE,DECKI	
					WOOD (001)	30-12
					LAMINATE,DECKI	
					LUMBER,HARDWOOD (001)	30-13
					D	

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
4	PFFZZ	2510-01-521-2739	8N013	M871A2-KIT	PARTS KIT,FLOOR,VEH INCLUDES 11 BOARDS (6) 30FT & (5) 19FT UOC: SKB 1 FLOOR,BODY,VEHIC (001) 30-15 ULA FLOOR,BODY,VEHIC (001) 30-16 ULA FLOOR,BODY,VEHIC (001) 30-17 ULA FLOOR,BODY,VEHIC (001) 30-18 ULA FLOOR,BODY,VEHIC (001) 30-19 ULA FLOOR,BODY,VEHIC (001) 30-20 ULA FLOOR,BODY,VEHIC (001) 30-21 ULA FLOOR,BODY,VEHIC (001) 30-22 ULA FLOOR,BODY,VEHIC (001) 30-23 ULA FLOOR,BODY,VEHIC (001) 30-24 ULA FLOOR,BODY,VEHIC (001) 30-25 ULA	
5	PFFZZ	2590-01-260-0219	94658	RK804-1A	TWISTLOCK,CONE,KIT REPAIR KIT INCLUDES CONE (TRUNK) AND PINS (NO HANDLE) UOC: SKB 1 KIT,TWISTLOCK (001) 19-3 REPAI	
6	PFFZZ	5340-01-213-1308	94658	RK804-1B	HANDLE,MANUAL CONTR REPAIR KIT INCLUDES HANDLE AND PIN UOC: SKB 1 HANDLE (001) 19-4 PIN (001) 19-6	
7	PFFZZ	2530-01-499-3440	4N361	42710558	PARTS KIT,SHOE BRAK..... 1 BUSHING,NONMETA (004) 9-2 LLIC STANDOFF,THREAD (004) 9-3 ED,S NUT,PLAIN,EXTENDE(004) 9-4 D BRACKET,MOUNTIN (004) 9-5 G	

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
8	PFFZZ	2590-01-499-3446	4N361	42710563	PARTS KIT,BRACKET,V 2 KITS REQUIRED PER AXLE.....	1
					STANDOFF,THREAD (004)	9-3
					ED,S	
					NUT,PLAIN,EXTENDE(004)	9-4
					D	
					BRACKET,MOUNTIN (004)	9-5
					G	

END OF FIGURE

FIELD MAINTENANCE
BULK

ILLUSTRATION NOT REQUIRED

Figure BULK. Bulk.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 9501 HARDWARE SUPPLIES AND BULK MATERIEL, COMMON						
FIG. BULK. BULK.						
1	PFFZZ	9390-01-509-0712	3DGR3	51457017	TAPE, REFLECTIVE WHITE.....	1
2	PFFZZ	9390-01-470-3620	13548	98101	TAPE, REFLECTIVE RED/WHITE (40 FEET REQUIRED).....	1
3	PFFZZ	9390-01-504-6187	13548	98107	TAPE, REFLECTIVE RED/WHITE (40 FEET REQUIRED).....	1
4	PFFZZ	4720-01-287-9313	93061	PFT-6B-RED 500	TUBING, NONMETALLIC 3/8" RED.....	1
5	PFFZZ	4720-01-287-9322	45152	1605340	TUBING, NONMETALLIC 3/8" BLUE.....	1

END OF FIGURE

**FIELD MAINTENANCE
NATIONAL STOCK NUMBER (NSN) INDEX**

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5310-00-045-3299	1	2	5365-00-753-4865	7	17
5310-00-045-8839	11	7	5310-00-761-0654	30	27
4730-00-050-4203	19	5	5310-00-763-8920	33	1
5310-00-061-4651	26	1	5310-00-809-5997	23	24
5305-00-071-2069	20	12		33	7
	23	26	5310-00-814-0673	4	4
	26	5	5310-00-823-8803	33	2
5305-00-071-2072	20	6	5320-00-850-3282	36	2
5305-00-071-2073	33	8	5310-00-880-7744	13	5
5310-00-080-6004	20	10	5310-00-934-9757	1	3
	21	3	5306-00-993-6257	30	26
5310-00-087-7493	20	5	6220-01-088-5915	1	1
5305-00-115-9526	23	10	5330-01-090-2107	17	8
4730-00-202-6491	12	8	6220-01-095-0010	2	4
5331-00-205-3583	7	9	4730-01-096-9128	12	1
5310-00-225-6993	23	23		12	5
5306-00-226-4827	17	13	2640-01-098-2029	18	4
5305-00-226-4831	4	5	5306-01-098-7197	25	16
3120-00-255-6042	8	12		25	43
5310-00-261-7340	7	15	5306-01-098-7198	25	9
5305-00-269-3217	23	3	5310-01-098-7236	25	21
5310-00-269-4040	33	1		25	44
4730-00-277-8257	12	9	5310-01-098-7244	25	14
5325-00-279-1248	5	11		25	41
5325-00-281-6623	7	19	5310-01-098-7245	25	6
5325-00-290-0074	5	12		25	34
3110-00-293-8997	17	3	5310-01-098-7246	25	20
3110-00-293-8998	17	1		25	45
3120-00-322-6430	8	2	5310-01-098-7247	25	23
2530-00-406-6785	8	5		25	49
5310-00-407-9566	17	12	5310-01-098-7827	25	7
4730-00-469-7797	12	15		25	35
5315-00-482-1586	8	8	2510-01-100-7167	25	5
5310-00-488-3889	20	9		25	37
	33	5	2590-01-100-9001	25	4
5305-00-543-4372	21	7		25	38
2640-00-555-2823	18	5	2510-01-100-9270	25	13
5310-00-584-5272	26	6		25	40
3110-00-618-0248	17	7	2520-01-101-0935	25	17
3110-00-618-0249	17	5		25	32
5310-00-637-9541	21	2	2520-01-101-2551	25	19
5305-00-724-6761	33	4		25	48
5305-00-724-7222	23	11	2510-01-101-2559	25	10
	26	3		25	46
5305-00-725-2317	21	4	2510-01-101-2890	25	12
5305-00-726-2551	25	8		25	39
	25	36	5340-01-112-6396	33	3
			5310-01-126-9404	23	7

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5310-01-133-5373	7	18	5935-01-480-6241	11	1
5360-01-158-1974	8	10	6220-01-482-5320	2	7
4730-01-164-3365	12	14	6220-01-482-5444	2	4
5310-01-174-0431	23	6	6220-01-482-5574	2	1
5340-01-175-0564	23	8	6220-01-482-6113	2	1
6220-01-183-4557	2	7	4820-01-497-8729	15	3
5340-01-209-6524	19	1	2530-01-499-3135	7	1
5340-01-213-1308	KITS	6	2530-01-499-3159	7	1
5306-01-222-9071	19	10	2530-01-499-3170	11	9
5935-01-224-1226	12	3	6150-01-499-3289	5	2
5340-01-239-0890	20	4	6150-01-499-3311	5	3
4710-01-240-9431	25	22	6150-01-499-3315	5	4
	25	30	5310-01-499-3318	23	18
2590-01-241-6060	21	5		24	4
5310-01-251-7570	19	9	6150-01-499-3320	5	5
2590-01-260-0219	KITS	5	6150-01-499-3321	5	6
5340-01-264-1579	33	3	6150-01-499-3323	5	7
5342-01-271-6326	8	3	6150-01-499-3327	5	8
5315-01-272-6607	8	11	6150-01-499-3328	5	9
4730-01-283-1877	12	11	6150-01-499-3329	5	10
4720-01-287-9313	BULK	4	6150-01-499-3332	5	1
4720-01-287-9322	BULK	5	5305-01-499-3342	2	9
2530-01-311-8410	7	12	6220-01-499-3350	3	1
5365-01-314-6592	20	2	4730-01-499-3360	14	6
2590-01-315-2610	21	6	5325-01-499-3362	5	13
5305-01-315-3563	7	16	5310-01-499-3372	7	6
2510-01-315-6287	22	1	5325-01-499-3380	7	7
5365-01-316-3300	25	18	5310-01-499-3382	7	2
	25	33	4730-01-499-3385	7	13
5315-01-316-7547	23	9	5530-01-499-3386	28	4
5340-01-317-2657	19	8	3120-01-499-3388	7	8
5340-01-317-9251	33	6	5530-01-499-3391	28	3
5340-01-318-6775	20	7	5360-01-499-3396	8	9
5340-01-325-2249	30	29	6150-01-499-3397	11	8
5330-01-328-6090	7	3	2530-01-499-3399	9	1
5310-01-334-4710	30	28	5340-01-499-3404	9	3
9905-01-343-1011	34	3	5340-01-499-3405	9	5
5306-01-347-5921	25	3	4730-01-499-3406	10	1
	25	29	4810-01-499-3407	10	2
9905-01-352-7999	34	1	5365-01-499-3408	9	2
5305-01-359-1367	7	5	5340-01-499-3409	29	4
2530-01-359-8091	7	4	2540-01-499-3425	31	4
4730-01-365-9072	12	13	5310-01-499-3438	9	4
5340-01-407-2311	25	24	2520-01-499-3439	13	4
	25	50	2530-01-499-3440	KITS	7
5305-01-432-1763	20	1	2590-01-499-3446	KITS	8
5307-01-440-1364	17	4	5310-01-499-3456	14	7
2530-01-449-9475	17	6		29	1
2590-01-450-0304	38	3	9320-01-499-3458	14	8
6150-01-459-1811	2	2	5310-01-499-3459	7	14
	2	5	5310-01-499-3461	14	1
9390-01-470-3620	BULK	2		29	2
2530-01-478-7603	18	3	5305-01-499-3465	14	2

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
	29	5	2520-01-499-5403	6	1
4730-01-499-3471	16	4	2530-01-499-5407	8	1
	16	6	5310-01-499-5412	13	2
5315-01-499-3472	24	5	5310-01-499-5416	13	3
2530-01-499-3476	17	2		17	9
5340-01-499-3481	11	11	2530-01-499-5421	17	11
5330-01-499-3487	17	10	2590-01-499-5434	23	2
5310-01-499-3489	18	6	2590-01-499-5437	23	5
4720-01-499-3490	12	12	5340-01-499-5543	23	13
5340-01-499-3618	8	4	5315-01-499-5545	23	14
5325-01-499-3619	37	2	5320-01-499-5546	23	16
2530-01-499-3629	14	4		27	6
4820-01-499-3653	14	5	2530-01-499-5547	23	17
5310-01-499-3654	38	2	5340-01-499-5549	24	6
4730-01-499-3663	15	1	5305-01-499-5551	2	3
5310-01-499-3682	31	3		3	2
5310-01-499-3687	31	2		4	5
4730-01-499-3709	12	16		11	3
5340-01-499-3717	12	17		16	1
2530-01-499-3718	23	12		16	9
7690-01-499-3759	36	5		20	14
2510-01-499-3799	27	2		34	2
5340-01-499-4157	27	5	4010-01-499-7594	23	15
5305-01-499-4202	23	22		27	7
5360-01-499-4204	25	11	2510-01-499-7636	27	3
	25	47	2510-01-499-7638	27	1
5310-01-499-4209	25	15	5305-01-499-7657	30	14
	25	42	5305-01-499-7665	31	1
5310-01-499-4211	25	26	2530-01-504-2552	13	1
	25	52	5310-01-504-6159	32	2
5305-01-499-4217	25	2	9390-01-504-6187	BULK	3
	25	28	5330-01-504-8610	16	7
4030-01-499-4227	24	2		16	12
2540-01-499-4246	29	3	5330-01-504-8614	16	5
2510-01-499-4251	24	1		16	14
5310-01-499-4253	32	3	9390-01-509-0712	BULK	1
5305-01-499-4256	32	4	5310-01-509-2488	20	3
7690-01-499-4257	36	4		21	1
7690-01-499-4258	36	4		21	8
7690-01-499-4259	36	12	2530-01-509-7685	KITS	2
7690-01-499-4261	36	11	5340-01-512-9064	11	2
6240-01-499-4267	37	1	5325-01-514-9957	19	2
4730-01-499-4270	10	3	2510-01-521-2739	KITS	4
	12	7	2510-01-521-4208	30	25
	14	3	2510-01-521-4213	30	18
	15	2	2510-01-521-4217	30	19
5315-01-499-4271	23	19	2510-01-521-4228	30	20
	24	3	2510-01-521-4230	30	21
5310-01-499-4273	23	20	2510-01-521-4232	30	23
	23	21	2510-01-521-4245	30	24
	25	25	2510-01-521-4248	30	15
	25	51	2510-01-521-4252	30	16
2510-01-499-4290	19	4	2510-01-521-4255	30	17

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
2510-01-521-4399	30	22	2590-01-556-1718	23	4
2510-01-521-8635	22	1	5510-01-556-1819	30	1
5220-01-521-8643	22	2	2510-01-556-1934	28	5
2590-01-522-2672	11	4	2510-01-556-1938	28	2
2541-01-531-4064	20	8	2590-01-556-2068	23	1
2590-01-532-8937	20	11	2590-01-556-2096	2	6
5305-01-551-4703	11	5	4720-01-556-2134	12	2
2530-01-551-8601	KITS	1	5310-01-556-2138	26	2
5340-01-551-8607	16	3	6680-01-556-2589	38	1
3120-01-552-7425	7	10	7690-01-556-2648	36	6
5310-01-552-7435	11	6	7690-01-556-3415	36	3
2590-01-556-1200	23	25	7690-01-556-3420	36	1
2590-01-556-1271	7	11	7690-01-556-4209	36	7
2590-01-556-1273	31	6	5310-01-556-9152	23	5
2510-01-556-1274	28	6	4730-01-557-1926	16	13
2590-01-556-1276	23	25	9905-01-557-2549	36	9
5310-01-556-1277	16	10	9905-01-557-2550	36	10
2510-01-556-1279	26	4	5340-01-557-8520	16	2
2590-01-556-1332	23	1	5510-01-558-8143	30	2
2590-01-556-1346	23	27	5510-01-558-8144	30	10
2590-01-556-1385	31	6	2510-01-558-8153	KITS	3
2510-01-556-1390	27	4	5510-01-558-8397	30	6
5325-01-556-1398	2	8	5510-01-558-8489	30	12
5310-01-556-1400	8	7	5510-01-558-8545	30	7
5330-01-556-1405	31	5	5510-01-558-8572	30	11
5305-01-556-1408	23	2	5510-01-558-8767	30	3
5305-01-556-1411	8	6	5510-01-558-9542	30	5
4730-01-556-1415	16	11	5510-01-558-9549	30	9
4730-01-556-1420	12	1	5510-01-559-0830	30	8
4730-01-556-1422	12	1	5510-01-559-0836	30	4
4730-01-556-1425	12	4	5510-01-559-0847	30	13
4730-01-556-1426	12	14	2610-01-569-2153	18	2
5340-01-556-1428	20	13	2530-01-584-7914	18	1
2590-01-556-1440	23	27	5306-01-593-9779	25	31
2510-01-556-1448	28	1	2590-01-597-8904	23	1
6130-01-556-1480	4	1	2990-01-597-8906	26	7
2530-01-556-1664	16	8	2530-99-782-3392	11	10

END OF WORK PACKAGE

**FIELD MAINTENANCE
PART NUMBER (P/N) INDEX**

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
A-3105-K-219	7	10	M871-A1-A	33	5
A-3299-T-5844	7	11	M871-A1-B	30	1
A-A-52611-2-2-TR572	18	5	M871-A1-C	30	2
A23105G1151	7	12	M871-A1-D	30	3
AES01C312A50AW9A91	4	5	M871-A1-E	30	4
AMP43726	10	1	M871-A1-F	30	5
ANSI B18.2.2	13	5	M871-A1-G	30	6
B1821BH031C100N	17	13	M871-A1-H	30	7
B1821BH038C075D	23	10	M871-A1-I	30	8
B1821BH038C075N	21	7	M871-A1-J	30	9
B1821BH038C150N	21	4	M871-A1-K	30	10
B1821BH050C150N	20	12	M871-A1-KIT	KITS	3
	23	26	M871-A1-L	30	11
	26	5	M871-A1-M	30	12
B1821BH050C225N	20	6	M871-A1-N	30	13
B1821BH050C250N	33	8	M871A2-A	30	15
B1821BH063C200N	23	11	M871A2-B	30	16
	26	3	M871A2-C	30	17
B1821BH063F200N	25	8	M871A2-D	30	18
	25	36	M871A2-E	30	19
B370025BG2	17	8	M871A2-F	30	20
B893-02	25	22	M871A2-G	30	21
	25	30	M871A2-H	30	22
BF90M45XXZNXX	20	7	M871A2-I	30	23
CP0540	21	10	M871A2-J	30	24
CP3473	21	6	M871A2-K	30	25
F187-20-8	20	2	M871A2-KIT	KITS	4
F804-1-3	19	2	M871A2-L	30	26
F804-1-4	19	4	MCDM1-31SS	12	3
HANDLE-1	19	3	MP0-0919-C	30	29
HM218210	17	5	MS14315-2X	12	8
HW3	13	2	MS16624-125	7	19
KIT8078	KITS	1	MS27183-13	20	5
KP-AAR-4	22	1	MS27183-14	20	10
KP-T-809-F	22	1	MS27183-17	21	3
KSMA2124707QP	KITS	2		23	24
LG0070-02	23	9	MS27183-21	33	7
LG0083-05	23	8	MS27183-42	33	2
M24243/1-A408	36	2	MS35338-46	1	2
M45913/1-10CG5C	33	1	MS35338-48	30	28
M45913/1-10CG8C	26	1	MS35338-103	26	6
M45913/1-8CG5C	23	23	MS35489-109	5	11
M45913/3-5CG8C	4	4	MS35489-109	5	12
M45913/3-6CG8C	20	3	MS35649-282	1	3
	21	1	MS35751-77	30	26
	21	8	MS51967-20	33	1
M45913/3-8CG8C	20	9	MS51967-9	30	27
			MS90725-167	33	4
			MS90725-67	23	3

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
PFT-6B-BLU-AR	12	10	07430072	29	4
PFT-6B-RED 500	BULK	4	07758002	24	1
PFT-6B-RED-AR	12	6	08796002	24	5
PH2969-1	19	7	0D70-1898-00	4	2
PP0016-03	23	6	0L90-1874-00	4	3
PRP08-36L	19	6	10-X-1348	7	16
QSC-441721	16	3	10-X-1421	7	5
R955458	11	11	10055-00	25	11
RC71-68	33	6		25	47
RK804-1A	KITS	5	10060-01	25	16
RK804-1B	KITS	6		25	43
RSC-03279	17	3	101162	17	4
S3155-L-1234	11	4	10202Y	2	4
S4005001030	10	2	10205R	2	7
S4493641530	11	8	10273-00	25	14
S4497130300	11	9		25	41
SAE J246 6-6-6 100425BA	12	11	10376-00	25	3
SAT-18315	20	4		25	29
SD002C	36	6	10476-01	25	24
SL1000	33	3		25	50
SR2024707QP	8	1	10608-00	25	12
TB-20	33	3		25	39
TF-0110	22	2	10687100	23	25
TMHM212049	17	1	10687101	23	27
TS0002	21	5	10687102	23	25
TS0013	21	9	10687103	23	27
UTM-2412	4	1	10710P11	7	17
WA-36	7	14	110500	15	3
00028263	31	6	11513-03	25	15
00028264	31	6		25	42
00166005	31	4	1205-Q-2123	7	3
01546002	23	12	1205X726	7	9
01546003	23	17	1218G85	8	8
01578006	23	14	1225-R-1058	7	8
019-00001-7	7	15	12258212	1	1
019-00004-42	21	2	1225B496	8	12
02302044	23	13	1229-B-1848	7	18
02321502	26	2	1229-R-4100	7	2
02976010	23	18	1229-S-4101	7	6
	24	4	1229-T-4102	7	7
04694005	28	4	12315354	25	4
04694006	28	3		25	38
04694012	28	6	12315564	25	13
04694014	28	2		25	40
04694015	28	5	12315610	25	10
04696001	27	2		25	46
04696002	27	3	12315614	25	21
04696003	27	1		25	44
04696005	27	4	12548842	18	1
05472019	26	7	1343	17	11
0716-MM5-U03	12	9	1605340	BULK	5
07406	2	1	16087-1	36	5
07407	2	1	166407	13	1

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
1693182C1	8	9	50170005	32	4
1707B2	8	5	50172008	14	2
17900-086	5	5		29	5
18125-400	5	10	50172106	8	6
2002391	12	13	50173008	31	1
20231UH3T	17	2	50174006	23	22
207ACBH-4	12	14	50174017	25	2
2210-D-6868	7	1		25	28
2210-E-6869	7	1	50408PG	18	3
2237-Z-1222	11	1	50450016	23	15
2237M1235	11	2		27	7
2258-Q-615	8	10	50462030	27	5
22602	12	15	50462035	24	2
2297-B-5046	7	13	50487001	12	16
2297T7222	8	2	50491010	12	17
23276-01	25	18	50501006	12	1
	25	33	50506050	36	9
2348-10308-40	19	9	50507065	36	10
2511	20	8	50507096	36	11
25150-028	5	4	50507098	36	12
28161-028	5	1	50720025	12	1
2GL765	7	4	50822014	29	3
3/8-16X1-1/2 SHCS	20	1	50823044	16	11
30255R	2	4	50823045	16	13
30255Y	2	7	50823046	16	8
30257Y	37	1	50823047	16	10
30720	2	6	50824014	37	2
31-26-2	17	7	50824018	2	8
3105B210	8	3	50824060	5	13
3264-A-1457	8	4	50851109	5	2
338-426	25	19	50866003	12	12
	25	48	50866009	12	2
3919T15	24	6	50886021	38	1
400 20211	9	1	50890077	23	2
401095	14	5	50890078	23	5
42710558	KITS	7	50920012	3	1
42710563	KITS	8	50976003	36	4
441 032 8080	11	10	50976005	36	7
441105	16	4	50976051	36	4
	16	6	50976052	36	8
443-10204	9	4	50976054	36	1
443-10318	9	3	50976055	36	3
445-10467	9	5	50979015	15	1
452-10125	9	2	50981049	13	3
453795	17	10		17	9
4HA891	16	7	50990007	18	6
	16	12	50995050	32	3
4HA892	16	5	50995054	14	7
	16	14		29	1
500174-1	19	5	50995056	31	3
50045217	6	1	50995065	23	20
50104001	12	4		23	21
50104002	12	14		25	25

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
	25	51	61000048	23	1
50995152	8	7	61000051	28	1
51029007	14	8	61251004	20	11
51182002	23	19	627-100-GOVT	18	4
	24	3	63400-227	5	7
51205007	10	3	64014008	20	13
	12	7	641-0004	38	2
	14	3	65340002	16	2
	15	2	66884	17	6
51205015	14	6	67042	18	2
51457017	BULK	1	68NTA-6-6	12	1
51475007	14	4		12	5
52050001	23	16	70-7100-00	5	6
	27	6	72203-012	5	3
52100010	2	3	7410218	17	12
	3	2	78038-1	19	1
	4	5	817-00	25	6
	11	3		25	34
	16	1	82100-008	5	9
	16	9	835-02	25	31
	20	14	837-00	25	20
	34	2		25	45
52100013	2	9	841-00	25	7
52116040	30	14		25	35
52125333	13	4	891-00	25	17
52302-036	5	8		25	32
52600090	31	5	895-00	25	23
550	32	1		25	49
55752003	32	2	91839A006	11	7
55752005	14	1	92141A006	11	6
	29	2	92196A130	11	5
55752007	31	2	9422297	23	7
55752009	25	26	94626	2	2
	25	52		2	5
577653C1	8	11	9489T13	19	10
58080045	23	4	9639-03	25	9
6	19	8	98006R	34	3
610-0065	38	3	98006Y	34	1
61000004	26	4	98100-AR	35	1
61000008	25	1	98101	BULK	2
	25	27	98101-AR	35	2
61000010	23	1	98107	BULK	3
61000034	23	1	98107-AR	35	3
61000035	23	2	9937-00	25	5
61000036	23	5		25	37

END OF WORK PACKAGE

CHAPTER 10

SUPPORTING INFORMATION

WORK PACKAGE INDEX

Title	WP Sequence No.
REFERENCES.....	WP 0132
MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION.....	WP 0133
MAINTENANCE ALLOCATION CHART (MAC)	WP 0134
COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS.....	WP 0135
ADDITIONAL AUTHORIZATION LIST (AAL).....	WP 0136
EXPENDABLE AND DURABLE ITEMS LIST.....	WP 0137
TOOL IDENTIFICATION LIST.....	WP 0138

FIELD MAINTENANCE REFERENCES

SCOPE

This Work Package (WP) lists forms, field manuals, technical manuals, and other publications that are referenced in this manual and that apply to the operation and field maintenance of the M871R Series Semitrailer.

DA PAM 25-30, Consolidated Index of Army Publications and Blank Forms, should be consulted frequently for changes or revisions and for new publications relating to material covered in this technical manual.

ARMY REGULATIONS

AR 700-138	Army Logistics Readiness and Sustainability
AR 750-1	Army Materiel Maintenance Policy

ARMY SUPPLY BULLETIN

SB 740-98-1	Storage Serviceability Standard: Tracked Vehicles, Wheeled Vehicles, and Component Parts
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COMMON TABLES OF ALLOWANCES

CTA 8-100	Army Medical Department Expendable/Durable Items
CTA 50-909	Field and Garrison Furnishings and Equipment
CTA 50-970	Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)

FIELD MANUALS

FM 4-20.199	Multiservice Helicopter Sling Load: Dual-Point Load Rigging Procedures
FM 4-25.11	First Aid
FM 9-207	Operation and Maintenance of Ordnance Material in Cold Weather
FM 90-3	Desert Operations

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2407	Maintenance Request

FORMS - Continued

DA Form 5988-E	Equipment Inspection and Maintenance Worksheet
DD Form 314	Preventive Maintenance Schedule and Record
DD Form 1397	Processing and Deprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines
SF 364	Report of Discrepancy (ROD)
SF 368	Product Quality Deficiency Report (PQDR)

MILITARY SPECIFICATIONS

MIL-DTL-53072	Chemical Agent Resistant Coating (CARC) System, Application Procedures and Quality Control Inspection.
MIL-E-22200/10	Electrodes, Welding, Mineral Covered, Iron-Powder, Low- Hydrogen Medium, High Tensile and Higher-Strength Low Alloy Steels
MIL-E-23765/2	Electrodes and Rods - Welding, Bare, Solid, or Alloy Cored; and Fluxes, Low Alloy Steel
MIL-PRF-680	Degreasing Solvent
MIL-PRF-2104	Lubricating Oil, Internal Combustion Engine, Combat/ Tactical Service
MIL-PRF-10924	Grease, Automotive and Artillery
MIL-PRF-46167	Lubricating Oil, Internal Combustion Engine, Arctic

PAMPHLETS

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 75-5	List of Storage and Outloading Drawings for Ammunition
DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual
SDDCTEA PAM 55-19	Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) Handbook, Lifting and Tiedown Handbook for Rail Movements
SDDCTEA PAM 55-20	SDDCTEA Handbook, Tiedown Handbook for Truck Movements
SDDCTEA PAM 55-24	SDDCTEA Handbook, Vehicle and Equipment Preparation Handbook for Fixed Wing Air Movements

TACOM DRAWING

TACOM Welding Drawing 12479550	Ground Combat Vehicle Welding Code—Steel
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TECHNICAL BULLETINS

TB 9-2510-242-40	Towed Wheeled Vehicles, FSC Class 2330, Lunette Trailers and Semitrailers: Repair of Frames
TB 43-0139	Painting Instructions for Army Materiel
TB 43-0209	Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment and Materials Handling Equipment
TB 43-0242	WD CARC Spot Painting
TB 43-0239	Maintenance in the Desert

TECHNICAL CIRCULARS

TC 9-237	Operator's Circular Welding Theory and Application
TC 21-305-20	Manual for the Wheeled Vehicle Operator

TECHNICAL MANUALS

TM 9-214	Inspection, Care and Maintenance of Antifriction Bearings
TM 9-247	Materials Used for Cleaning, Preserving, Abrading and Cementing Ordnance Material and Related Materials Including Chemicals
TM 9-2610-200-14	Operators, Unit, Direct Support and General Support Maintenance Manual for Care, Maintenance Repair and Inspection of Pneumatic Tires and Inner Tubes
TM 38-400	Joint Service Manual (JSM) for Storage and Materials Handling
TM 43-0139	Painting Instructions for Army Materiel
TM 55-2200-001-12	Transportability Guidance for Application of Blocking, Bracing and Tiedown Materials for Rail Transport
TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command)

OTHER PUBLICATIONS

ASME Y14.38-2007	American Society Mechanical Engineering Standard, Abbreviations and Acronyms for Use on Drawings and Related Documents
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END OF WORK PACKAGE

FIELD MAINTENANCE MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

This MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field – includes two subcolumns, Crew (C) and Maintainer (F).

Sustainment – includes two subcolumns, Below Depot (H) and Depot (D).

The maintenance to be performed at field and sustainment levels is described as follows:

1. Crew Maintenance. The responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. The replace function for this level of maintenance is indicated by the letter "C" in the third position of the Source, Maintenance, and Recoverability (SMR) code. A "C" appearing in the fourth position of the SMR code indicates complete repair is possible at the crew maintenance level.
2. Maintainer Maintenance. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "F" appearing in the third position of the SMR code. An "F" appearing in the fourth position of the SMR code indicates complete repair is possible at the field maintenance level. Items are returned to the user after maintenance is performed at this level.
3. Below depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "H" appearing in the third position of the SMR code. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at the below depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this level.
4. Depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. Depot sustainment maintenance can be performed by either depot personnel or contractor personnel. A "D" or "K" appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply systems after maintenance is performed at this level.

The Tools and Test Equipment Requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The Remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance function.

INTRODUCTION - Continued

Maintenance Functions

Maintenance functions are limited to and defined as follows:

1. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel). This includes scheduled inspection and gaugings and evaluation of cannon tubes.
2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e. load testing of lift devices and hydrostatic testing of pressure hoses.
3. Service. Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:
 - a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.
 - b. Repack. To return item to packing box after service and other maintenance operations.
 - c. Clean. To rid the item of contamination.
 - d. Touch up. To spot paint scratched or blistered surfaces.
 - e. Mark. To restore obliterated identification.
4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.
6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
7. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. "Install" may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
8. Paint (Ammunition Only). To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.

INTRODUCTION - Continued

9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance, and Recoverability (SMR) code.
10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

NOTE

- The following definitions are applicable to the "repair" maintenance function:
 - **Services.** Inspect, test, service, adjust, align, calibrate, and/or replace.
 - **Fault location/troubleshooting.** The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).
 - **Disassembly/assembly.** The step-by-step breakdown (taking apart) of a spare/functional-group-coded item to the level of its least component that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).
 - **Actions.** Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.
11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.
 12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

INTRODUCTION - Continued**Explanation of Columns in the MAC**

Column (1) GROUP NUMBER. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance-significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) COMPONENT/ASSEMBLY. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) MAINTENANCE FUNCTION. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions, refer to "Maintenance Functions" outlined above.)

Column (4) MAINTENANCE LEVEL. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field:

- C Crew Maintenance
- F Field Maintenance

Sustainment:

- L Specialized Repair Activity (SRA)
- H Below depot maintenance
- D Depot maintenance

NOTE

The "L" maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the "H" column of column (4), and an associated reference code is used in column (6). This code is keyed to the remarks, and the SRA complete repair application is explained there.

Column (5) TOOLS AND EQUIPMENT REFERENCE CODE. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement, and Diagnostic Equipment (TMDE), and special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to the entries in the Tools and Test Equipment Requirements table.

Column (6) REMARKS CODE. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the Remarks table entries.

INTRODUCTION - Continued**Explanation of Columns in the Tools and Test Equipment Requirements**

Column (1) TOOL OR TEST EQUIPMENT REFERENCE CODE. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) MAINTENANCE LEVEL. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) NOMENCLATURE. Name or identification of the tool or test equipment.

Column (4) NATIONAL STOCK NUMBER (NSN). The NSN of the tool or test equipment.

Column (5) TOOL NUMBER. The manufacturer's part number.

Explanation of Columns in the Remarks

Column (1) REMARKS CODE. The code recorded in column (6) of the MAC.

Column (2) REMARKS. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

END OF WORK PACKAGE

**FIELD MAINTENANCE
MAINTENANCE ALLOCATION CHART (MAC)**

Table 1. MAC for M871R Series Semitrailer.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
00	M871R SERIES SEMITRAILER							
0000-00	PMCS (Before)	Inspect	0.7					
		Service	0.1					
0000-01	PMCS (During)	Inspect	0.1					
0000-02	PMCS (After)	Inspect	0.1					
		Service	0.3					
0000-03	PMCS (Weekly)	Inspect	0.1					
0000-04	PMCS (Monthly)	Inspect	0.2					
0000-05	PMCS (First Month)	Service		0.5			3, 7, 8	L
0000-06	PMCS (Semiannually)	Inspect		2.2			4, 6, 7	
		Service		1.6			3, 7, 8	L
0000-07	PMCS (Annually)	Inspect		1.0			7	
		Service		2.0			3, 7, 8	L

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0000-08	PMCS (Triennially)	Inspect		5.2			7	
		Service		2.0			3, 7, 8	L
06	ELECTRICAL SYSTEM							
0609-00	Lights, Blackout	Replace		0.5			7	B, I
0609-01	Lights, Marker/ Clearance (Amber and Red)	Replace		0.4			7	B, I
0609-02	Lights, Stop and Tail, LED (Red)	Replace		0.5			7	B, I
0613-00	Box, Receptacle Converter (M871R and M871A1R)	Replace		1.5			7	B, I
0613-01	Box, Receptacle Converter With Nose Plate (M871A2R)	Replace		2.0			7	B, I
0613-02	Chassis Wiring Harness	Replace		6.0			7	B, I
0613-03	Wire Connector	Inspect		1				
		Replace		1			7	B, I

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
11	REAR AXLE							
1100-00	Axle Assembly	Align		3.5			3, 5, 7, 8	B, E, L
		Replace		7.5			3, 5, 7, 8	B, E, L
12	BRAKES							
1202-00	S-Camshaft	Replace		2.5			3, 7, 8	B, L
1202-01	Service Brakes (Shoes and Lining)	Replace		2.0			1, 3, 7, 8	A, L
1202-02	Anchors, Rollers, Retainers, Springs, Bushings, Pins	Replace		1.0			1, 2, 3, 7, 8	A, L
1202-03	Dust Shield	Replace		1.0			7	B
1206-00	Slack Adjuster, Automatic	Adjust		0.2			7	B
		Replace		1.0			7	B
1207-00	Control Unit, Electronic (ECU) and Module	Replace		2.5			7	B, F, I, L
1207-01	Sensor, Wheel With Cable	Replace		1.5			7	B, I
1207-02	ABS Brake Power Connections	Replace		1.5			7	B, I
1208-00	Lines and Fittings, Air	Replace		1.0			7	B, L

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
1208-01	Chamber, Air Brake Long Stroke	Replace		2.0			7	B, F, L
1208-02	Reservoir, Air	Replace		2.0			3, 7, 8	B, L
1208-03	Valve, Air Drain and Pull Cables	Replace		0.4			7	B
1208-04	Valve, Multifunction (Air Brake Chamber Control)	Replace		1.5			7	B
1208-05	Air Supply, Gladhand M871R	Replace		0.5			7	B
		Repair		0.3			7	B
1208-06	Air Supply, Gladhand M871A1R and M871A2R	Replace		0.5			7	B
		Repair		0.3			7	B
13	WHEEL ASSEMBLY							
1311-00	Hub Cap/ Gasket	Replace		0.5			3, 7, 8	A, L
1311-01	Drum, Brake	Replace		1.0			3, 7, 8	A, L
1311-02	Hubs With Tone Rings	Replace		1.5			3, 7, 8	A, L
1311-03	Bearings, Inner/Outer	Adjust		1.0			2, 3, 7, 8	A, L
		Replace		1.5			3, 7, 8	A, L

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
1311-04	Seal, Wheel	Replace	1.0	1.5			3, 7, 8	A, H, L
1311-05	Wheel Assembly	Replace					3, 7, 8	A, L, M
15	FRAME, TOWING ATTACH- MENTS							
1501-00	Weld Mounts, Frame	Repair		6.0			3, 5, 7, 8	K, L
1501-01	Twistlock M871R and M871A1R	Replace		0.5			7	B
1501-02	Twistlock M871A2R	Repair		0.5			7	B
1501-03	Cargo Tiedown Deck D-Rings	Replace		0.7			3, 7, 8	B, L
1504-00	Carrier, Spare Tire	Replace		1.5			7	B
		Repair		1.0			7	
1506-00	Kingpin	Inspect		1.0			4, 6	
		Replace		7.0			3, 4, 5, 6, 7, 8	E, L
1507-00	Legs, Landing	Replace		2.5			3, 7, 8	B, L
		Repair		1.5			7	B
1507-01	Crank Handle	Replace		0.5			7	B
1507-02	Ground Boards	Replace		0.3			7	B
16	SUSPENSION							

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
1601-00	Spring Assembly, Leaf	Replace		5.0			3, 7, 8	B, G, L
1601-01	Tube, Trunnion	Replace		5.0			3, 7, 8	B, G, L
1601-02	Bushings, Polyurethane	Replace		2.5			3, 7, 8	B, G, L
1601-03	Plate, Adjustment (Spring)	Replace		2.5			3, 5, 7, 8	B, E, G, L
1601-04	End Cap and Rubber Pad	Replace		1.0			3, 7, 8	B, G, L
18	BODY							
1801-00	Bulkhead	Replace		3.5			7, 8	
1801-01	Front, Side, and Rear Stakes	Replace		0.1			7	B
		Repair		0.1			7	B
1801-02	Side and Rear Boards	Replace		0.1			7	B
1801-03	Flaps, Mud	Replace		0.7			7	B
1805-00	Decking	Replace		1.5			3, 5, 7, 8	C, D, L
1808-00	Box, Stowage	Replace		1.5			3, 7, 8	B, L
		Repair		2.0			5, 7	E
1808-01	Box, Manifest	Replace		0.5			7	B
21	PROTECTIVE DEVICE							

Table 1. MAC for M871R Series Semitrailer - Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
2101-00	Dock Bumpers, Rubber	Replace		0.4			7	B
22	ACCESSORY ITEMS							
2202-00	Reflectors	Replace		0.1			7	B
2202-01	Reflective Tape	Replace		0.1			7	B
2210-00	Plates, Data and Decals	Replace		0.3			3, 7, 8	B, L
2210-01	UID Label	Replace		0.2			7	B
42	ELECTRICAL EQUIPMENT							
4209-00	Light, Warning, ABS	Replace		0.4			7	I
47	GAGES (NON- ELECTRICAL)							
4701-00	Hub Mileage Meter	Replace		0.3			7	B

Table 2. Tools and Test Equipment Requirements for M871R Series Semitrailer.

TOOLS OR TEST EQUIPMENT	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	F	Bushing Driver Set, 1/2 to 3 in.	5120-00-150-7762	SC 4940-95-E42
2	F	Bushing Driver Set, 3-1/16 to 4-1/2 in.	5120-00-150-7761	
3	F	Forward Repair System	4940-01-533-1621	
4	F	Gage, Profile, Kingpin	5220-01-521-8643	
5	F	Shop Equipment, Welding	3470-00-357-7268	SC 3470-95-CL-A08
6	F	Straightedge, 48 in.	5210-00-084-0927	PD484
7	F	Tool Kit, General Mechanic's	5180-01-548-7634	
8	F	Tool Set, SATS, Base	4910-01-490-6453	

Table 3. Remarks for M871R Series Semitrailer.

REMARK CODE	REMARKS
A	Tires are for one axle end only.
B	Times are for each component/assembly.
C	Annual service to UV protect decking.
D	1.5 hours to replace each board.
E	Requires welding.
F	Component comes as an assembly only.
G	New suspension hardware requires wet (oiled) torque values. In-service hardware requires dry torque values.
H	A correct size seal drive must be used to prevent damage/cooking of seal. Hub bore must be clean and seal bottomed.
I	Silicone electric grease must be used on pins and connectors.
J	Times for wiring harness repairs will vary according to how many wires and/or connectors will require repair. Time given is an average.
K	Reference TB 9-2510-242-40.
L	The tools needed for this task will come from either the SATS or FRS tool kit based on the unit's MTOE.
M	The tools from BII will be used for this task.

END OF WORK PACKAGE

FIELD MAINTENANCE
COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

INTRODUCTION

Scope

This Work Package (WP) lists Components of End Item (COEI) and Basic Issue Items (BII) for the M871R Series Semitrailer to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII information is divided into the following lists:

COEI. The M871R Series Semitrailer does not have COEI.

BII. These essential items are required to place the M871R Series Semitrailer in operation, operate it, and do emergency repairs. Although shipped separately packaged, BII must be with the M871R Series Semitrailer during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the Table of Organization and Equipment (TOE) and Modified Table of Organization and Equipment (MTOE). Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the BII List

Column (1) ITEM NUMBER. Indicates the reference number of the item listed.

Column (2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION. Identifies the stock number of the item to be used for requisition purposes and provides an illustration of the item.

Column (3) DESCRIPTION, PART NUMBER/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (4) USABLE ON CODE. When applicable, identifies a code if the item needed is not the same for different models of equipment. These codes are identified below:

<u>Code</u>	<u>Used on</u>
SJB	Model M871R
SCB	Model M871A1R
SKB	Model M871A2R

Column (5) U/I. Unit of Issue indicates the physical measurement or count of the item as issued per the NSN shown in column (2).

Column (6) QTY RQR. Indicates the quantity required.

INTRODUCTION - Continued**NOTE**

- DO NOT use cross chains when using bows and tarp.
- Except for the diagnostic extension cable, blink code adapter diagnostic tool, side racks/hardware, splices, top rails, stakes, and twistlocks, everything else is over-packed in the stowage box. Panels and stakes will be secured in the bulkhead.

Table 1. Basic Issue Items for M871R Series Semitrailer.

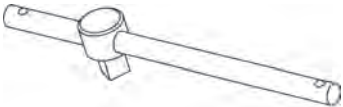
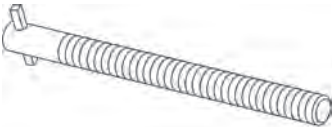
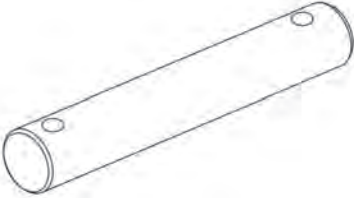
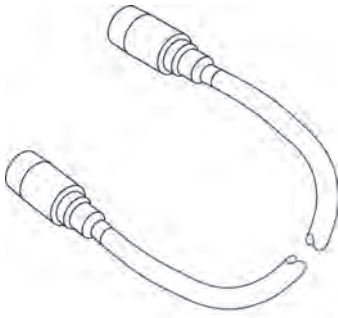
(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
1	5120-01-170-4980 	BAR, SOCKET WRENCH HANDLE (in stowage box) 50939002 (3DGR3)		EA	1
2	5306-01-500-1994 	BOLT, CAGING (on air chambers) RT1 (06721)		EA	4
3	5340-01-499-3742 	BRACKET, MOUNTING (in side brackets) 5HG90337-101 (81205)		EA	2
4	6150-01-499-5143 	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL (rear, center of semitrailer) 4493641520 (3D6E9)		EA	1

Table 1. Basic Issue Items for M871R Series Semitrailer - Continued.




(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
5	4010-01-499-5569 	CHAIN WITH HOOKS 20' (in stowage box) 4626005 (3DGR3)		EA	2
6	4010-01-499-5572 	CHAIN WITH HOOKS 25' (in stowage box) 4626006 (3DGR3)		EA	2
7	4010-01-499-5145 	CHAIN, WELDED (in stowage box) 04626004 (3DGR3)		EA	2

Table 1. Basic Issue Items for M871R Series Semitrailer - Continued.

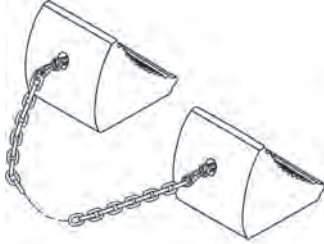

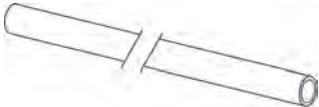
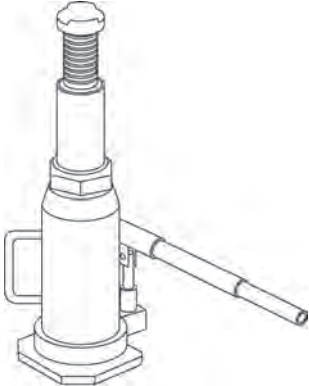
(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
8	2540-01-499-5553 	CHOCK, WHEEL-TRACK (in stowage box) 07758014 (3DGR3)		EA	2 blocks, 1 chain, 2 snaps
9	5935-01-480-6241 	CONNECTOR, RECEPTACLE, ELECTRICAL (rear, center of semitrailer) S2237-Z-1222 (78500)		EA	1 adapter, 1 cap
10	3040-01-499-5565 	EXTENSION SHAFT (in stowage box) 00016016 (3DGR3)		EA	1
11	2590-01-500-1997 	JACK ASSEMBLY (in stowage box) 07758080 (3DGR3)		EA	1 jack, 2 handles

Table 1. Basic Issue Items for M871R Series Semitrailer - Continued.

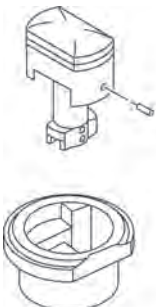
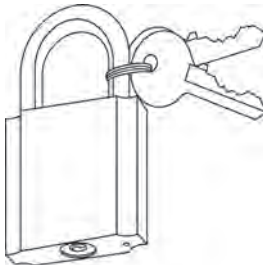


(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
12	2590-01-260-0219 	KIT, TWISTLOCK REPAIR (on left and right rails) RK804-1A (94658)		KT	4
13	2590-01-062-3520 	LOCK ASSEMBLY, CONTAINER (in stowage box) 1920-FC7537 (55683)		EA	4
14	4030-01-499-4227 	SHACKLE (in side brackets) 50462035 (3DGR3)		EA	2

Table 1. Basic Issue Items for M871R Series Semitrailer - Continued.

(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER (NSN) AND ILLUSTRATION	(3) DESCRIPTION, PART NUMBER/(CAGEC)	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
15	5120-01-514-3465 	WRENCH, SOCKET (LUG) (in stowage box) 50939001 (3DGR3)		EA	1

END OF WORK PACKAGE

FIELD MAINTENANCE ADDITIONAL AUTHORIZATION LIST (AAL)

INTRODUCTION

Scope

This Work Package (WP) lists additional items you are authorized for the support of the M871R Series Semitrailer.

General

This list identifies items that do not have to accompany the M871R Series Semitrailer and that do not have to be turned in with it. These items are all authorized to you by Common Table of Allowance (CTA), Modified Table of Organization and Equipment (MTOE), Table of Distribution and Allowances (TDA), or Joint Table of Allowances (JTA).

Explanation of Columns in the AAL

Column (1) NATIONAL STOCK NUMBER (NSN). Identifies the stock number of the item to be used for requisition purposes.

Column (2) DESCRIPTION, PART NUMBER/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (3) USABLE ON CODE. When applicable, identifies a code if the item needed is not the same for different models of equipment.

Column (4) U/I. Unit of Issue indicates the physical measurement or count of the item as issued per the NSN shown in column (1).

Column (5) QTY RECM. Indicates the quantity recommended.

NOTE

DO NOT use cross chains when using bows and tarps.

Table 1. Additional Authorization List for M871R Series Semitrailer.

(1) NATIONAL STOCK NUMBER (NSN)	(2) DESCRIPTION, PART NUMBER/ (CAGEC)	(3) USABLE ON CODE	(4) U/I	(5) QTY RECM
3990-01-213-1746	BINDER, LOAD: 26,000 lb (11,793 kg), Type IV R-45 (27404)		EA	4
2540-01-138-3995	BOW, VEHICULAR TOP 12255591 (19207)		EA	9
4010-00-449-6573	CHAIN ASSEMBLY, SINGLE LEG: 0.75 in. × 12 ft (1.9 cm × 3.66 m), WLL: 168,000 lb (76,203 kg) 7541364 (19204)		EA	As required
4010-00-803-8858	CHAIN ASSEMBLY, SINGLE LEG: 0.5 in. × 12 ft (1.27 cm × 3.66 m), WLL: 8,250 lb (3,742 kg) RRC271 (81348)		EA	As required
2510-01-060-7116	COVER PLATE, INTERMEDIATE: 7 × 8 ft (2.13 × 2.44 m), for Carrying Ammunition FB7556 (59306)		EA	6
3940-01-449-2369	NET, DRAFT COVER: 6.5 × 12 ft (1.98 × 3.66 m) B9154-078-114-2R-14C (098P0)		EA	As required
3940-01-449-2385	NET, DRAFT COVER: 8 × 14 ft (2.44 × 4.27 m) B9154-090-168-2R-14C (098P0)		EA	As required
5340-01-346-4612	PADLOCK ASTM F883 (81346)		EA	2
5340-01-317-2657	STRAP, ELASTIC 6 (1F926)		EA	1 each - clip end, as required
5340-01-029-9085	STRAP, ELASTIC 13034 (0G1Z0)		EA	1 each - 2/S-hooks, as required
5340-00-980-9277	STRAP, WEBBING 10900880 (19207)		EA	25
2540-00-797-9195	TARPAULIN: 47 × 14.5 ft (14.33 × 4.42 m), forest green 7979195 (19207)		EA	1
2540-01-333-2543	TARPAULIN: 47 × 14.5 ft (14.33 × 4.42 m), tan 12255592-1 (19207)		EA	1

Table 1. Additional Authorization List for M871R Series Semitrailer - Continued.

(1) NATIONAL STOCK NUMBER (NSN)	(2) DESCRIPTION, PART NUMBER/ (CAGEC)	(3) USABLE ON CODE	(4) U/I	(5) QTY RECM
8340-00-841-6453	TARPAULIN: 5 × 5 ft (1.52 × 1.52 m), olive drab MIL-DTL-32063 (81349)		EA	As required
8340-01-009-6285	TARPAULIN: 6 × 6 ft (1.83 × 1.83 m), tan MIL-T-2063 (81349)		EA	As required
8340-00-841-6454	TARPAULIN: 6 × 10 ft (1.83 × 3.05 m), olive drab MIL-DTL-32063 (81349)		EA	As required
1670-00-725-1437	TIE DOWN, CARGO, AIRCRAFT 10045035 (18876)		EA	25
3990-01-204-3009	TIE DOWN, CARGO, VEHICLE MIL-PRF-71224-1 (0KHZ6)		EA	25

END OF WORK PACKAGE

FIELD MAINTENANCE EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

Scope

This Work Package (WP) lists expendable and durable items that you will need to operate and maintain the M871R Series Semitrailer. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items); CTA 50-909, Field and Garrison Furnishings and Equipment; or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable and Durable Items List

Column (1) ITEM NO. The number assigned to the entry in the list and referenced in the narrative instructions to identify the item (e.g., Use adhesive (WP 0091, Item 1)).

Column (2) LEVEL. Identifies the lowest level of maintenance that requires the listed item: C = Crew, F = Field, H = Below Depot, or D = Depot.

Column (3) NATIONAL STOCK NUMBER (NSN). Identifies the stock number of the item to be used for requisition purposes.

Column (4) ITEM NAME, DESCRIPTION, PART NUMBER/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) U/I. Unit of Issue indicates the physical measurement or count of an item as issued per the NSN shown in column (3).

Table 1. Expendable and Durable Items List.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/ (CAGEC)	(5) U/I
1	F	8040-01-152-8105	ADHESIVE EA9309 NA A/B (33564)	KT
2	F	8030-00-015-1295	ANTISEIZE COMPOUND: 1 Pound (0.45 kg) 5148-1 (26344)	LB
3	C	7920-00-061-0038	BRUSH: Scrub 7920-00-061-0038 (83421)	EA
4	F	4730-00-289-8148	CAP: Lubrication Fitting, Protective MS24529-1 (96906)	EA
5	F	5340-00-450-5718	CAP SET: Protective, Dust and Moisture 10935405 (19207)	EA
6	C	6850-01-474-2319	CLEANING SOLVENT, TYPE II: 1 Gallon (3.78 L) Can MIL-PRF-680 (81349)	GL
7	C	6850-01-474-2317	CLEANING SOLVENT, TYPE II: 5 Gallon (18.92 L) Can MIL-PRF-680 (81349)	BX
8	C	6850-01-474-2316	CLEANING SOLVENT, TYPE II: 55 Gallon (208.19 L) Drum MIL-PRF-680 (81349)	DR
9	F	5350-00-192-5047	CLOTH: Abrasive, 80-Grit, 50 Sheets 00422002 (Z8X80)	PG
10	F	5350-00-192-5049	CLOTH: Abrasive, 120-Grit, 50 Sheets 05144-02458 (76381)	PG
11	F	5350-00-192-5051	CLOTH: Abrasive, 180-Grit, 50 Sheets PC451 (81348)	PG
12	F	5350-00-221-0872	CLOTH: Abrasive, Crocus, 50 Sheets ANSI B74.18 (80204)	PG
13	F	7920-01-004-7847	CLOTH: Cleaning, Lint Free SAE AMS 3819 CL1GRA (05AY8)	RO
14	F	8030-00-938-1947	CORROSION PREVENTIVE COMPOUND M81309-A2CO2 (81349)	CN
15	F	8030-01-414-7423	CORROSION PREVENTIVE COMPOUND: Twelve 16 Ounce (0.45 kg) Bottles T32CP90S6 (03GK3)	BX
16	F	8030-01-414-8947	CORROSION PREVENTIVE COMPOUND: 5 Gallon (18.92 L) Can T32P5 (03GK3)	CN
17	F	8030-01-414-7430	CORROSION PREVENTIVE COMPOUND: 55 Gallon (208.19 L) Drum T32D (03GK3)	DR
18	C	7930-00-282-9699	DETERGENT: General Purpose, Liquid 7930-00-282-9699 (83421)	BX

Table 1. Expendable and Durable Items List - Continued.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/ (CAGEC)	(5) U/I
19	C	9150-01-197-7688	GREASE: Automotive and Artillery, 2.25 Ounce (0.06 kg) Tube MIL-PRF-10924 (81349)	TU
20	C	9150-01-197-7693	GREASE: Automotive and Artillery, 14 Ounce (0.396 kg) Cartridge MIL-PRF-10924 (81349)	CA
21	C	9150-01-197-7690	GREASE: Automotive and Artillery, 1.75 Pound (0.79 kg) Can MIL-PRF-10924 (81349)	CN
22	C	9150-01-197-7692	GREASE: Automotive and Artillery, 35 Pound (15.87 kg) Can MIL-PRF-10924 (81349)	CN
23	F	9150-00-040-3891	GREASE: Silicone Insulated Electric Motor G305 (08125)	EA
24	F	7920-00-263-0328	HANDLE: Acme Threaded End, 60 inch (152.4 cm) for Paint Roller 7920-00-263-0328 (83421)	EA
25	F	5970-00-476-6717	INSULATING VARNISH: Electrical, 13 Ounce (0.37 kg) Aerosol Can 1602 (75037)	CN
26	F	8010-00-152-3245	LINSEED OIL: Boiled, 1 Gallon (3.78 L) Can 8010-00-152-3245 (80244)	GL
27	F	8010-00-684-8789	LINSEED OIL: Boiled, 5 Gallon (18.92 L) Can 8010-00-684-8789 (80244)	CN
28	F	9150-00-943-6880	MOLYBDENUM DISULFIDE: Grease ANTI-SIEZE 70 (12474)	TU
29	F	6810-00-264-6715	MOLYBDENUM DISULFIDE: Technical MDLYKOTE2 (94499)	LB
30	C	9150-01-518-9471	OIL: Lubricating, 10W Grade, 1 Quart (0.946 L) Can MIL-PRF-2104 (81349)	QT
31	C	9150-01-518-9484	OIL: Lubricating, 30W Grade, 1 Quart (0.946 L) Can MIL-PRF-2104 (81349)	QT
32	C	9150-00-402-2372	OIL: Lubricating, OEA, 5 Gallon (18.92 L) Can MIL-PRF-46167 (81349)	CN
33	C	9150-00-491-7197	OIL: Lubricating, Engine, 55 Gallon (208.19 L) Drum MIL-PRF-46167 (81349)	DR
34	F	8020-00-682-6498	PAINT ROLLER COVER: 9 Inch (22.86 cm), 1 Inch (2.54 cm) Pile 8020-00-682-6498 (80244)	EA
35	F	8020-00-689-5379	PAINT ROLLER KIT: 9 Inch (22.86 cm) With Paint Tray 8020-00-689-5379 (80244)	KT

Table 1. Expendable and Durable Items List - Continued.

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER/ (CAGEC)	(5) U/I
36	C	7920-00-205-1711	RAG: Wiping, 50 Pound (22.67 kg) Bale 7920-00-205-1711 (80244)	BE
37	F	8030-00-936-9940	SEALING COMPOUND: Edge 8 Ounce (0.23 kg) Can 75-3472-1519-8 (76318)	CN
38	F	5975-00-903-2284	STRAP: Tiedown, Electrical Components, 4 Inch (10.16 cm) Length, Black, Package of 100 MS3367-4-0 (96906)	HD
39	F	5975-00-984-6582	STRAP: Tiedown, Electrical Components, 6 Inch (15.24 cm) Length, Black, Package of 100 MS3367-1-0 (96906)	HD
40	F	5975-00-156-3253	STRAP: Tiedown, Electrical Components, 13.5 Inch (34.29 cm) AS33671-2-9 (81343)	HD
41	F	9905-00-537-8954	TAG: Marker, Bundle of 50 9905-00-537-8954 (64067)	BD
42	F	5640-00-103-2254	TAPE: Duct, 2 Inch (5.08 cm) Width, 60 Yard (54.76 cm) Length 1791K70 (39428)	RO
43	F	5970-00-184-2002	TAPE: Insulation, Electrical 1756654 (80064)	RO
44	F	5970-00-644-3167	TAPE: Insulation, Electrical, 85 Foot (26 m) Roll TL83 (80063)	RO

END OF WORK PACKAGE

FIELD MAINTENANCE TOOL IDENTIFICATION LIST

Scope

This Work Package (WP) lists all common tools and supplements and special tools/fixtures needed to maintain the M871R Series Semitrailer.

Most PM-SKOT products have lifetime warranties and replacement capabilities and are supported world-wide through PM-SKOT. The PM-SKOT implemented a Web-based tool replacement and warranty program in May 2005 for tools authorized in SKO. User may access the online program by first accessing the PM-SKOT Web site at <https://pmskot.army.mil> and clicking on the Tool Replacement/Warranty banner.

Explanation of Columns in the Tool Identification List

Column (1) - Item Number. This number is assigned to the entry in the list and is referenced in the initial setup to identify the item (e.g., Extractor (WP 0090, Item 32)).

Column (2) - Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g., Gauge, belt tension).

Column (3) - National Stock Number (NSN). This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

Column (4) - Part Number/(CAGEC). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity) which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items. The manufacturer's Commercial and Government Entity Code (CAGEC) is also included.

Column (5) - Reference. This column identifies the authorizing supply catalog or RPSTL for items listed in this WP.

Table 1. Tool Identification List.

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER / (CAGEC)	(5) REFERENCE
1	Apron	-	-	SATS (SC 4910-95-A81)
2	Bit, hex, insert 1/4 in. drive	-	-	SATS (SC 4910-95-A81)
3	Bushing driver set, 1/2 to 3 in.	5120-00-150-7762	27794 (45225)	-
4	Bushing driver set, 3-1/16 to 4-1/2 in.	5120-00-150-7761	27795 (45225)	-
5	Cutting torch	-	-	FRS (NSN 4940-01-533-1621) or SEW (SC 3470-95-CL-A08)

Table 1. Tool Identification List - Continued.

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER /(CAGEC)	(5) REFERENCE
6	Dial indicator	-	-	SATS (SC 4910-95-A81)
7	Drill	-	-	SATS (SC 4910-95-A81)
8	Drill set, twist	-	-	FRS (NSN 4940-01-533-1621), SATS (SC 4910-95-A81), or SEW (SC 3470-95-CL-A08)
9	Gage, profile, kingpin	5220-01-521-8643	TF-0110 (74410)	-
10	Gloves	-	-	FRS (NSN 4940-01-533-1621)
11	Grinder	-	-	SATS (SC 4910-95-A81)
12	Jack	-	-	SATS (SC 4910-95-A81)
13	Jack stands	-	-	SATS (SC 4910-95-A81)
14	Multimeter	-	-	SATS (SC 4910-95-A81)
15	Plasma cutter	-	-	SEW (SC 3470-95-CL-A08)
16	Retaining ring pliers	-	-	FRS (NSN 4940-01-533-1621), SATS (SC 4910-95-A81), or SEW (SC 3470-95-CL-A08)
17	Riveter kit, blind	5180-01-201-4978	-	FRS (NSN 4940-01-533-1621) or SATS (SC 4910-95-A81)
18	Shop equipment, welding	3470-00-357-7268	-	SATS (SC 4910-95-A81)

Table 1. Tool Identification List - Continued.

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER / (CAGEC)	(5) REFERENCE
19	Socket, 3-3/4 in., 3/4 in. drive	-	-	FRS (NSN 4940-01-533-1621) or SATS (SC 4910-95-A81)
20	Soldering gun	-	-	FRS (NSN 4940-01-533-1621)
21	Straightedge, 48 in.	5210-00-084-0927	599-526-48 (09058)	-
22	Suitable lifting device, 300 lb (136 kg) capacity	-	-	SATS (SC 4910-95-A81)
23	Suitable lifting device, 850 lb (386 kg) capacity	-	-	SATS (SC 4910-95-A81)
24	Tool Kit, General Mechanic's	5180-01-548-7634	PD484 (19200)	CL 5180-95-B48
25	Torque multiplier	-	-	FRS (NSN 4940-01-533-1621) or SATS (SC 4910-95-A81)
26	Torque wrench 0 to 200 lb-ft (0 to 271 N•m)	-	-	FRS (NSN 4940-01-533-1621)
27	Torque wrench 120 to 600 lb-ft (163 to 813 N•m)	5120-01-400-0319	-	FRS (NSN 4940-01-533-1621)
28	Welder, MIG	-	-	SEW (SC 3470-95-CL-A08)
29	Welding mask	-	-	FRS (NSN 4940-01-533-1621), SATS (SC 4910-95-A81), or SEW (SC 3470-95-CL-A08)
30	Wire crimpers	-	-	SATS (SC 4910-95-A81)

END OF WORK PACKAGE

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TO (Forward to proponent of publication or form) (Include ZIP Code) U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-IMP/TECH PUBS MS 727 6501 E. 11 Mile Road, Warren, MI 48397-5000						FROM (Activity and location) (Include ZIP Code) <i>Your mailing address</i>	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER <i>TM Number</i>						DATE <i>Date of the TM</i>	TITLE <i>Title of the TM</i>
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)	
	0007-3					<i>Figure 2, Item 9 should show a lockwasher. Currently shows a flat washer.</i>	
	0018-2					<i>Cleaning and inspection, Step 6, reference to governor support pin (14) is wrong reference. Reference should be change to (12).</i>	
<h1>SAMPLE</h1>							
TYPED NAME, GRADE OR TITLE <i>Your Name</i>						TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <i>Your Phone Number</i>	
						SIGNATURE <i>Your Signature</i>	

TO <i>(Forward direct to addressee listed in publication)</i> U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-IMP/TECH PUBS MS 727 6501 E. 11 Mile Road, Warren, MI 48397-5000				FROM <i>(Activity and location) (Include ZIP Code)</i> Your Address				DATE <i>Date you filled out this form</i>	
PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS									
PUBLICATION/FORM NUMBER <i>TM Number</i>				DATE <i>Date of the TM</i>		TITLE <i>Title of the TM</i>			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION	
<div style="font-size: 100px; font-weight: bold; opacity: 0.5;">SAMPLE</div>									
PART III – REMARKS <i>(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)</i>									
TYPED NAME, GRADE OR TITLE <i>Your Name</i>				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <i>Your Phone Number</i>			SIGNATURE <i>Your Signature</i>		

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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 9-2330-335-13&P						DATE 07 DECEMBER 2015	TITLE Semitrailer, Tactical, Breakbulk/Container Transporter 22 1/2 Ton M871R Series
ITEM	PAGE	PARA- GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)	
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE

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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
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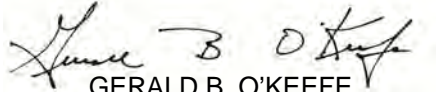
TO: <i>(Forward direct to addressee listed in publication)</i> U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-IMP/TECH PUBS MS 727 6501 E. 11 Mile Road, Warren, MI 48397-5000				FROM: <i>(Activity and location)(Include Zip Code)</i>			DATE	
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PUBLICATION/FORM NUMBER TM 9-2330-335-13&P						DATE 07 DECEMBER 2015	TITLE Semitrailer, Tactical, Breakbulk/Container Transporter 22 1/2 Ton M871R Series
ITEM	PAGE	PARA- GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)	
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TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE		

By Order of the Secretary of the Army:

Official:

A handwritten signature in black ink, appearing to read "Gerald B. O'Keefe", is written over a light gray rectangular background.

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Secretary of the Army*

1531705

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*General, United States Army
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THE METRIC SYSTEM AND EQUIVALENTS

<p>Linear Measure</p> <p>1 Centimeter = 10 Millimeter = 0.01 Meters = 0.3937 Inches 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches 1 Kilometer = 1000 Meters = 0.621 Miles</p> <p>Weights</p> <p>1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces 1 Kilogram = 1000 Grams = 2.2 Pounds 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons</p> <p>Liquid Measure</p> <p>1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces 1 Liter = 1000 Milliliters = 32.82 Fluid Ounces</p>	<p>Square Measure</p> <p>1 Sq. Centimeter = 100 Sq. Millimeter = 0.155 Sq. Inches 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Inches 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles</p> <p>Cubic Measure</p> <p>1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches 1 Cu. Centimeters = 35.31 Cu. Feet</p> <p>Temperature</p> <p>$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$ 212° Fahrenheit is equivalent to 100° Celsius 90° Fahrenheit is equivalent to 32.2° Celsius 32° Fahrenheit is equivalent to 0° Celsius $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$</p>
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APPROXIMATE CONVERSION FACTORS

To Change	To	Multiply By
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Sq Inches	Sq Centimeters	6.451
Sq Feet	Sq Meters	0.093
Sq Yards	Sq Meters	0.836
Sq Miles	Sq Kilometers	2.590
Acres	Sq Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Sq Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

To Change	To	Multiply By
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Sq Centimeters	Sq Inches	0.155
Sq Meters	Sq Feet	10.764
Sq Meters	Sq Yards	1.196
Sq Kilometers	Sq Miles	0.386
Sq Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Sq Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

